

Analytical Data Package Prepared For  
**CH2M Hill Plateau Remediation**

**Radiochemical Analysis By  
TestAmerica Inc**

***2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.***

**Assigned Laboratory Code: TARL**

***Data Package Contains 103 Pages***

**Report No.: 69692**

**Results in this report relate only to the sample(s) analyzed.**

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W07625	I16-018	B34KC6	J6I220418-1	M89DJ1AA	9M89DJ10	6272027
	S16-004	B34MB5	J6I220419-1	M89DK1AE	9M89DK10	6260018
		B34MB5	J6I220419-1	M89DK1AC	9M89DK10	6270062
		B34MB5	J6I220419-1	M89DK1AF	9M89DK10	6270063
		B34MB5	J6I220419-1	M89DK1AA	9M89DK10	6270064
		B34MB5	J6I220419-1	M89DK1AK	9M89DK10	6270068
		B34MB5	J6I220419-1	M89DK1AG	9M89DK10	6270072
		B34MB5	J6I220419-1	M89DK1AJ	9M89DK10	6271048
		B34MB5	J6I220419-1	M89DK1AD	9M89DK10	6273030
		B34MB5	J6I220419-1	M89DK1AH	9M89DK10	6273031
I16-029		B36BB2	J6I210409-1	M88491AA	9M884910	6270073
		B36BB2	J6I210409-1	M88491AC	9M884910	6270074
		B36BB2	J6I210409-1	M88491AD	9M884910	6273031
X16-053		B36BK5	J6I260401-3	M89L01AC	9M89L010	6270074
		B36BK5	J6I260401-3	M89L01AF	9M89L010	6271042
		B36BK5	J6I260401-3	M89L01AG	9M89L010	6271048
		B36BK5	J6I260401-3	M89L01AE	9M89L010	6272025
		B36BK5	J6I260401-3	M89L01AD	9M89L010	6273030
		B36BK5	J6I260401-3	M89L02AA	9M89L020	6292018
		B36BL1	J6I260401-2	M89LX1AC	9M89LX10	6270074
		B36BL1	J6I260401-2	M89LX1AF	9M89LX10	6271042
		B36BL1	J6I260401-2	M89LX1AG	9M89LX10	6271048
		B36BL1	J6I260401-2	M89LX1AD	9M89LX10	6273030
		B36BL1	J6I260401-2	M89LX2AE	9M89LX20	6291050
		B36BL1	J6I260401-2	M89LX2AA	9M89LX20	6292018
		B36BL2	J6I260401-4	M89L11AC	9M89L110	6270074

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W07625	X16-053	B36BL2	J6I260401-4	M89L11AF	9M89L110	6271042
		B36BL2	J6I260401-4	M89L11AG	9M89L110	6271048
		B36BL2	J6I260401-4	M89L11AE	9M89L110	6272025
		B36BL2	J6I260401-4	M89L11AD	9M89L110	6273030
		B36BL2	J6I260401-4	M89L12AA	9M89L120	6292018
		B36BL9	J6I260401-5	M89L21AA	9M89L210	6270073
		B36BL9	J6I260401-5	M89L21AC	9M89L210	6270074
		B36BL9	J6I260401-5	M89L21AF	9M89L210	6271042
		B36BL9	J6I260401-5	M89L21AG	9M89L210	6271048
		B36BL9	J6I260401-5	M89L21AE	9M89L210	6272025
		B36BL9	J6I260401-5	M89L21AD	9M89L210	6273030
		B36BM0	J6I260401-1	M89LW1AC	9M89LW10	6271042
		B36BM0	J6I260401-1	M89LW1AA	9M89LW10	6273030
		B36BM6	J6I260401-6	M89L31AC	9M89L310	6270074
		B36BM6	J6I260401-6	M89L31AF	9M89L310	6271042
		B36BM6	J6I260401-6	M89L31AG	9M89L310	6271048
		B36BM6	J6I260401-6	M89L31AE	9M89L310	6272025
		B36BM6	J6I260401-6	M89L31AD	9M89L310	6273030
		B36BM6	J6I260401-6	M89L32AA	9M89L320	6292018
I16-030		B36C94	J6I260417-5	M89PN1AA	9M89PN10	6272027
		B36C94	J6I260417-5	M89PN1AC	9M89PN10	6273031
		B36CJ5	J6I260417-3	M89PL1AA	9M89PL10	6272027
		B36CJ5	J6I260417-3	M89PL1AC	9M89PL10	6273031
		B36CJ6	J6I260417-4	M89PM1AA	9M89PM10	6272027
		B36CJ6	J6I260417-4	M89PM1AC	9M89PM10	6273031
S16-009		B36FW5	J6I210406-1	M88401AD	9M884010	6260018
		B36FW5	J6I210406-1	M88401AE	9M884010	6270072
		B36FW5	J6I210406-1	M88401AA	9M884010	6270074
		B36FW5	J6I210406-1	M88401AF	9M884010	6271048
		B36FW5	J6I210406-1	M88401AC	9M884010	6273030
		B36FX0	J6I220417-1	M89DH1AD	9M89DH10	6260018
		B36FX0	J6I220417-1	M89DH1AF	9M89DH10	6270072
		B36FX0	J6I220417-1	M89DH1AA	9M89DH10	6270074
		B36FX0	J6I220417-1	M89DH1AG	9M89DH10	6271048
		B36FX0	J6I220417-1	M89DH1AE	9M89DH10	6272025
		B36FX0	J6I220417-1	M89DH1AC	9M89DH10	6273030
		B36FX5	J6I210406-2	M88411AD	9M884110	6260018
		B36FX5	J6I210406-2	M88411AE	9M884110	6270072

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SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
W07625	S16-009	B36FX5	J6I210406-2	M88411AA	9M884110	6270074
		B36FX5	J6I210406-2	M88411AF	9M884110	6271048
		B36FX5	J6I210406-2	M88411AC	9M884110	6273030
		B36H06	J6I260405-1	M89L91AD	9M89L910	6270074
		B36H06	J6I260405-1	M89L91AG	9M89L910	6271048
		B36H06	J6I260405-1	M89L91AE	9M89L910	6272025
		B36H06	J6I260405-1	M89L91AA	9M89L910	6272027
		B36H06	J6I260405-1	M89L92AC	9M89L920	6292018
		B36M18	J6I260405-2	M89MN1AA	9M89MN10	6272027
		B36M18	J6I260405-2	M89MN1AC	9M89MN10	6273031
		B36M56	J6I260416-1	M89PF1AA	9M89PF10	6272027
		B36M58	J6I260416-3	M89PH1AF	9M89PH10	6260018
		B36M58	J6I260416-3	M89PH1AD	9M89PH10	6270062
		B36M58	J6I260416-3	M89PH1AG	9M89PH10	6270063
		B36M58	J6I260416-3	M89PH1AA	9M89PH10	6270064
		B36M58	J6I260416-3	M89PH1AK	9M89PH10	6270068
		B36M58	J6I260416-3	M89PH1AH	9M89PH10	6270072
		B36M58	J6I260416-3	M89PH1AJ	9M89PH10	6271048
		B36M58	J6I260416-3	M89PH1AC	9M89PH10	6272027
		B36M58	J6I260416-3	M89PH1AE	9M89PH10	6273030
I16-030		B36M59	J6I260417-1	M89PJ1AA	9M89PJ10	6272027
		B36MB8	J6I260417-2	M89PK1AA	9M89PK10	6272027
S16-009		B36MF9	J6I260416-2	M89PG1AA	9M89PG10	6272027



## Certificate of Analysis

CH2M Hill Plateau Remediation Company  
P.O. Box 1600  
Mail Stop – R3-60  
Richland, WA 99352

November 15, 2016

Attention: Scot Fitzgerald

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SAF Number	:	I16-018, I16-029, I16-030, S16-004, S16-009, X16-053
Date SDG Closed	:	September 23, 2016
Number of Samples	:	Twenty Two (22)
Sample Type	:	Water
SDG Number	:	W07625
Data Deliverable	:	30-Day / Summary

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### **CASE NARRATIVE**

#### **I. Introduction**

Between September 20, 2016 and September 23, 2016, twenty two samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned laboratory ID numbers to correspond with the CH2M specific IDs.

#### **II. Sample Receipt**

The samples were received in good condition and no anomalies were noted during check-in.

#### **III. Analytical Results/Methodology**

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

**Alpha Spectroscopy**  
Americium 241 by method RL-ALP-003  
Plutonium-238, -239/240 by method RL-ALP-002  
Uranium 234, 235 and 238 by method RL-ALP-009

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**Gas Proportional Counting**

Gross Alpha by method RL-GPC-001  
Gross Beta by method RL-GPC-001  
Strontium-90 by method RL-GPC-010  
Total Alpha Radium (Ra-226) by RL-RA-002

**Gamma Spectroscopy**

Gamma Spec by method RL-GAM-001  
Iodine-129 (LL) by method RL-GAM-002

**Liquid Scintillation Counting**

Carbon-14 by method RL-LSC-008  
Plutonium-241 by method RL-ALP-002  
Selenium-79 by method RL-LSC-012  
Technetium-99 by TEVA method RL-LSC-014  
Tritium by method RL-LSC-005

**IV. Quality Control**

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section. QC and sample results are reported in the same units.

**V. Comments****Alpha Spectroscopy**Americium 241 by method RL-ALP-003:

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

Plutonium-238, -239/240 by method RL-ALP-002:

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

Uranium 234, 235 and 238 by method RL-ALP-009:

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

**Gas Proportional Counting**Gross Alpha by method RL-GPC-001:

The MDA for the sample duplicate exceeds the CRDL. The result for sample duplicate is less than the MDA and CRDL. No other analytical or quality issues were noted. Except as noted, the sample result and associated batch QC results are within contractual requirements.

Gross Beta by method RL-GPC-001:

The MDA for sample B36H06 exceeds the CRDL and the sample result exceeds the MDA. No other analytical or quality issues were noted. Except as noted, the sample result and associated batch QC results are within contractual requirements.

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**Strontium-90 by method RL-GPC-010:**

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

**Total Alpha Radium (Ra-226) by RL-RA-002:**

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

**Gamma Spectroscopy**

**Gamma Spec by method RL-GAM-001:**

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

**Iodine-129 (LL) by method RL-GAM-002:**

Sample B36BL1 was analyzed in a separate batch from the other samples. No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

**Liquid Scintillation Counting**

**Carbon-14 by method RL-LSC-008:**

The MS recovery is outside acceptance criteria with no recovery. The sample associated to the MS has a result exceeding five times the CRDL. No other analytical or quality issues were noted. Except as noted, the sample result and associated batch QC results are within contractual requirements.

**Plutonium-241 by method RL-ALP-002:**

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

**Selenium-79 by method RL-LSC-012:**

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

**Technetium-99 by TEVA method RL-LSC-014:**

No analytical or quality issues were noted. The sample result and associated batch QC results are within contractual requirements.

**Tritium by method RL-LSC-005:**

The matrix spike recovery is high at 154%. The sample result exceeds five times the expected. No other analytical or quality issues were noted. Except as noted, the sample result and associated batch QC results are within contractual requirements.

CH2M Hill Plateau Remediation Company  
November 15, 2016

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We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager (or designee) and the laboratory's client services representative as verified by their signatures on this report.

Reviewed and approved:

*Whitney N. Ritari*

Digitally signed by  
Whitney Ritari  
Date: 2016.11.15  
12:09:50 -08'00'

Whitney Ritari  
Project Manager

**SAMPLE ISSUE RESOLUTION**

<b>SIR NUM</b>	SIR16-697
<b>REV NUM</b>	0
<b>DATE INITIATED</b>	9/29/2016

**SAMPLE EVENT INFORMATION**

**SAF NUM(S)** S16-009  
**OPERABLE UNIT(S)** NONE  
**PROJECT(S)** SURV16  
**SAMPLE EVENT TITLE(S)** SURV16  
**LABORATORY** TestAmerica Incorporated, Richland

**SAMPLING INFORMATION**

**NUMBER OF SAMPLES** 1  
**SAMPLE NUMBERS** B36FX5  
**SAMPLE MATRIX** WATER  
**COLLECTION DATE** 9/20/2016 - 9/20/2016  
**SDG NUM** W07625

**ISSUE BACKGROUND**

**CLASS** Chain of Custody Issue (Field)  
**TYPE** Sample Date/time is missing/incorrect/illegible  
**DESCRIPTION** COC S16-009-160 SAMPLE B36FX5  
INCORRECT SAMPLE DATE

**DISPOSITION**

**DESCRIPTION** DOCUMENT AND CLOSE  
**JUSTIFICATION** DOCUMENT AND CLOSE

SUBMITTED BY: Gayelyn Gibson DATE: 09/22/2016  
ACCEPTED BY: Kirsten Killand DATE: 09/29/2016

<b>SAMPLE ISSUE RESOLUTION</b>	<b>SIR NUM</b> SIR17-134
	<b>REV NUM</b> 0
	<b>DATE INITIATED</b> 11/7/2016

**SAMPLE EVENT INFORMATION****SAF NUM(S)** S16-009, X16-053, S16-004**OPERABLE UNIT(S)** 200-UP-1, NONE**PROJECT(S)** CERC16, SURV16**SAMPLE EVENT TITLE(S)** CERC16, SURV16**LABORATORY** TestAmerica Incorporated, Richland**SAMPLING INFORMATION****NUMBER OF SAMPLES** 11**SAMPLE NUMBERS** B34MB5, B36BK5, B36BL1, B36BL2, B36BL9, B36BM0, B36BM6, B36FW5, B36FX0, B36FX5, B36M58**SAMPLE MATRIX** WATER**COLLECTION DATE** 9/20/2016 - 9/23/2016**SDG NUM** W07625**ISSUE BACKGROUND****CLASS** Laboratory Issue**TYPE** Quality Control Failure**DESCRIPTION** The Matrix Spike recovery for Carbon 14 analysis was outside acceptance criteria with a recovery of 70%. A recount confirmed results. The sample MDAs are below the CRDL, the batch blank and LCS are within the acceptance criteria.**DISPOSITION****DESCRIPTION** Report results and include comment in the case narrative that Matrix Spike is outside acceptance criteria.**JUSTIFICATION** Final Disposition: Accept proposed resolution.SUBMITTED BY: Whitney Ritaril DATE: 11/07/2016  
ACCEPTED BY: Scot Fitzgerald DATE: 11/07/2016

### Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

**Results in this report relate only to the sample(s) analyzed.**

### Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship,  $R = \text{constants} * f(x,y,z,...)$ . The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties ( $u_i$ ) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty ( $u_c$ ) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value ( $S/\sqrt{n}$ ), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

## Report Definitions

<b>Action Lev</b>	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
<b>Batch</b>	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
<b>Bias</b>	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
<b>COC No</b>	Chain of Custody Number assigned by the Client or TestAmerica.
<b>Count Error (#s)</b>	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
<b>CSU (#s) <i>u<sub>c</sub> Combined Standard Uncert.</i></b>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, <i>u<sub>c</sub> the combined standard uncertainty</i> . The uncertainty is absolute and in the same units as the result.
<b>(#s), Coverage Factor</b>	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
<b>CRDL (RL)</b>	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
<b>Lc</b>	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgrndCnt/BkgrndCntMin}) / \text{SCntMin})) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
<b>Lot-Sample No</b>	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
<b>MDC MDA MDL</b>	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgrndCnt/BkgrndCntMin}) / \text{SCntMin}) + 2.71 / \text{SCntMin}) * (\text{ConvFct} / (\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . For LSC methods the batch blank is used as a measure of the background variability.
<b>Primary Detector</b>	The instrument identifier associated with the analysis of the sample aliquot.
<b>Ratio U-234/U-238</b>	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
<b>Rst/MDC</b>	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
<b>Rst/TotUcert</b>	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
<b>Report DB No</b>	Sample Identifier used by the report system. The number is based upon the first five digits of the <b>Work Order Number</b> .
<b>RER</b>	The equation Replicate Error Ratio = $(S-D)/[\sqrt{TPUs^2 + TPUs^2}]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUs is the total uncertainty of the duplicate sample.
<b>SDG</b>	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
<b>Sum Rpt Alpha Spec Rst(s)</b>	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
<b>Work Order</b>	The LIMS software assign test specific identifier.
<b>Yield</b>	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **S16-009-158**

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Collector	Ed Kauer CHPRC	Contact/Requester	Karen Waters-Husted
SAF No.	S16-009	Sampling Origin	Hanford Site
Project Title	SURV, SEPTEMBER 2016	Logbook No.	HNF-N-506 29/JZ
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE
Protocol	SURV	Priority:	30 Days

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis		Holding Time	Preservative
						SPECIAL INSTRUCTIONS	Hold Time		
B36FW5	N	W	9-26-16	0930	1x1-L P	9310_ALPHABETA_GPC: Gross Beta		6 Months	HNO3 to pH <2
B36FW5	N	W			3x1-L G/P	GAMMA_GS: COMMON; GAMMA_GS: GW_01		6 Months	HNO3 to pH <2
B36FW5	N	W			1x500-mL P	TC99_ETVDSK_LSC: COMMON		6 Months	HCl to pH >2
B36FW5	N	W			2x1-L G/P	C14_LSC: COMMON		6 Months	None
B36FW5	N	W			2x1-L G/P	SE79_SEP IE_LSC: COMMON	✓	6 Months	HNO3 to pH <2

Total Activity Exemption: Yes  No

\*\* N/A  
Special Handling:N/A

Sept 21 2016  
Wise

Relinquished By <b>Ed Kauer CHPRC</b>	Print <i>Ed Kauer</i>	Sign <i>Ed Kauer</i>	Date/Time 9-20-16 0935	Received By <b>Will Wise CHPRC</b>	Print <i>Will Wise</i>	Sign <i>Will Wise</i>	Date/Time 9-20-16 0935		Matrix *
Relinquished By <b>Will Wise CHPRC</b>	Print <i>Will Wise</i>	Sign <i>Will Wise</i>	Date/Time SEP 20 2016 1425	Received By <b>J. Bock, TARL</b>	Print <i>J. Bock</i>	Sign <i>J. Bock</i>	Date/Time SEP 20 2016 1425		
Relinquished By			Date/Time	Received By			Date/Time		
Relinquished By			Date/Time	Received By			Date/Time		
PRINTED ON	8/1/2016	FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By			Date/Time		

PRINTED ON	8/1/2016	FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
					A-6004-842 (REV 2)

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **S16-009-160**

Page 1 of 1

Collector	Ed Kauer <i>/CHPRC</i>	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-009	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, SEPTEMBER 2016	Logbook No.	HNF-N-506 89 / 17	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	30 Days	PRIORITY	Offsite Property No.
				SPECIAL INSTRUCTIONS	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
				Hold Time	
				Sample Analysis	Preservative
				Time	Time
				No./Type Container	Holding Time
Sample No.	Filter	*	Date	1x1-L P	6 Months
B36FX5	N	W	9-20-17	1001	HNO3 to pH <2
B36FX5	N	W		2x1-L G/P	None
B36FX5	N	W		C14_LSC: COMMON	6 Months
B36FX5	N	W		3x1-L G/P	HNO3 to pH <2
B36FX5	N	W		SE79_SEP_1E_LSC: COMMON	6 Months
B36FX5	N	W		TC99_ETVDSK_LSC: COMMON 1994U1	HCl to pH <2

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Preservative
B36FX5	N	W	9-20-17	1001	1x1-L P	9310_ALPHABETA_GPC: Gross Beta	
B36FX5	N	W			2x1-L G/P	C14_LSC: COMMON	
B36FX5	N	W			3x1-L G/P	GAMMA_GS: COMMON; GAMMA_GS: GW 01	
B36FX5	N	W			2x1-L G/P	SE79_SEP_1E_LSC: COMMON	
B36FX5	N	W			1x500-ml P	TC99_ETVDSK_LSC: COMMON 1994U1	

Test 9-21-14  
JET210404  
w0n0s

11/15/2016

REV. 1

Relinquished By <i>Ed Kauer /CHPRC</i>	Date/Time <i>9-20-16 12:00</i>	Received By <i>Janelle Zunker /CHPRC</i>	Date/Time <i>9-20-16 12:00</i>	Print <i>Janelle Zunker</i>	Sign <i>Janelle Zunker</i>	Date/Time <i>9-20-16 12:00</i>	Matrix * <i>S = Soil</i>
Relinquished By <i>Janelle Zunker /CHPRC</i>	Date/Time <i>SEP 20 2016 1425</i>	Received By <i>J. Bock, TARL</i>	Date/Time <i>SEP 20 2016 1425</i>	Print <i>J. Bock</i>	Sign <i>J. Bock</i>	Date/Time <i>SEP 20 2016 1425</i>	<i>DS = Drum Solids SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air</i>
Relinquished By	Date/Time	Received By	Date/Time				
Relinquished By	Date/Time	Received By	Date/Time				
Final Sample Disposition	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time				

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

Date Time Received: 9-20-14 / 1425**Sample Check-in List**

Container GM Screen Result: (Airlock) O cpm Initials B ]  
 Sample GM Screen Result (Sample Receiving) O cpm Initials B ]  
 Client: Pew SDG #: WD7625 SAF #: S14-009 NA B ]  
 Lot Number: J61210404

Chain of Custody # S14-009-158-160Shipping Container ID or Air Bill Number: \_\_\_\_\_ NA B ]

Samples received inside shipping container cooler box  
 Yes B ] Continue with 1 through 4. Initial appropriate response.  
 No        Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes        No        No Custody Seal B ]  
 2. Custody Seals dated and signed? Yes        No        No Custody Seal B ]  
 3. Cooler temperature: 4.4 °C NA         
 4. Vermiculite packing materials is NA B ] Wet        Dry

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes B ] No         
 6. Number of samples received (Each sample may contain multiple bottles): 2  
 7. Containers received: 2 + 500 ml p; 16x10
- 
8. Sample holding times exceeded? NA        Yes        No B ]  
 9. Samples have: tape hazard labels custody seals appropriate sample labels  
 10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)  
 11. Samples:  
B are in good condition \_\_\_\_\_ are leaking \_\_\_\_\_ are broken  
 have air bubbles (Only for samples requiring no head space) \_\_\_\_\_ Other \_\_\_\_\_  
 12. Sample pH appropriate for analysis requested Yes B ] No        NA         
 (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)  
 13. Were any anomalies identified in sample receipt? Yes        No B ]  
 14. Description of anomalies (include sample numbers): NA B ]  
 15. Sample Location, Sample Collector Listed on COC? \* Yes B ] No         
 \*For documentation only. No corrective action needed.  
 16. Additional Information:

[ ] Client Courier denied temperature check.

[ ] Client Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:

Signature: Julie Back Date: 9-20-14

Client Notification needed? Yes        No F Date: \_\_\_\_\_  
 By: \_\_\_\_\_  
 Person contacted: \_\_\_\_\_

B No action necessary; process as is

Project Manager Stm CuyM Date 9/21/16

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. #

**116-029-164**

Page 1 of 1

Collector	Dan Woehle CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	116-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	3000071
Project Title	100NR2, SEPTEMBER 2016	Logbook No.	HNF-N-506 <u>8Z / 33</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	<b>30 Days</b>	<b>PRIORITY</b>	Offsite Property No.
				SPECIAL INSTRUCTIONS	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
				N/A	

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Hold Time	Holding Time	Preservative
B36BB2	N	W	2/19/16	1323	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	6 Months	HNO3 to pH <2
B36BB2	N	W	2/19/16	1323	3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON <u>M8849</u>	6 Months	6 Months	HNO3 to pH <2

11/15/2016

REV. 1



Troy L. Bacon  
woehle

Relinquished By Dan Woehle CHPRC	Print <u>woehle</u>	Sign <u>11/15/2016</u>	Date/Time <u>11/15/2016</u>	Received By <u>Troy L. Bacon</u>	Print <u>J621 #1</u>	Sign	Date/Time <u>11/15/2016</u>	Matrix *
Relinquished By <u>SSJ#1</u>	Print <u>SSJ#1</u>	Sign <u>11/15/2016</u>	Date/Time <u>11/15/2016</u>	Received By <u>Troy L. Bacon</u>	Print <u>J621 #1</u>	Sign	Date/Time <u>11/15/2016</u>	Matrix *
Relinquished By Troy Bacon CHPRC	Print <u>Troy L. Bacon</u>	Sign <u>11/15/2016</u>	Date/Time <u>11/15/2016</u>	Received By <u>Troy L. Bacon</u>	Print <u>J621 #1</u>	Sign	Date/Time <u>11/15/2016</u>	Matrix *
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
PRINTED ON 8/15/2016	FSR ID = FSR2788	A-6004-842 (REV 2)	

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

Date Time Received: 9-20-14 | 1000 Container GM Screen Result: (Airlock) O cpm Initials [ ]  
 Sample GM Screen Result (Sample Receiving) O cpm Initials [ ]

Client: QEW SDG #: I14 W01625 SAF #: I14-029 NA [ ]

Lot Number: JL05210409

Chain of Custody # I14-029-144

Shipping Container ID or Air Bill Number: NA [ ]

Samples received inside shipping container cooler box

Yes [ ] Continue with 1 through 4. Initial appropriate response.  
 No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact?
2. Custody Seals dated and signed?
3. Cooler temperature:
4. Vermiculite/packing materials is

Yes [ ] No [ ] No Custody Seal [ ]  
 Yes [ ] No [ ] No Custody Seal [ ]  
3.6 °C [ ] NA [ ]  
 NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present?
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 4+4

8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: tape hazard labels  custody seals appropriate sample labels
10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)

11. Samples: are in good condition are leaking are broken  
have air bubbles (Only for samples requiring no head space) Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]  
 (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ]

15. Sample Location, Sample Collector Listed on COC? \* Yes [ ] No [ ]  
 \*For documentation only. No corrective action needed.

16. Additional Information: V/A

[ ] Client Courier denied temperature check.

B Client Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:

Signature: John Date: 09-20-14

Client Notification needed? Yes [ ] No [ ] Date: \_\_\_\_\_  
 By: \_\_\_\_\_  
 Person contacted: \_\_\_\_\_

No action necessary; process as is

Project Manager Stm CymM Date 9/21/16

CH2MHill Plateau Remediation  
Company

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. #

**S16-009-159**

Page 1 of 1

Collector	Ed Kauer /CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-009	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, SEPTEMBER 2016	Logbook No.	HNF-N-506 <u>82/17</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	<b>30 Days</b>	<b>PRIORITY</b>	Offsite Property No.
				SPECIAL INSTRUCTIONS	Hold Time
				N/A	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
POSSIBLE SAMPLE HAZARDS/REMARKS  ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1					

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36FX0	N	W	9-20-16	1339	1x1-L P	9310_ALPHABETA_GPC: Gross Beta	6 Months	HNO3 to pH <2
B36FX0	N	W			3x1-L G/P	GAMMA_GS: COMMON; GAMMA_GS: GW 01	6 Months	HNO3 to pH <2
B36FX0	N	W			4x1-L G/P	1129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B36FX0	N	W			1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2
B36FX0	N	W			2x1-L G/P	C14_LSC: COMMON	6 Months	None
B36FX0	N	W			2x1-L G/P	SE79_SEP_1E_LSC: COMMON	6 Months	HNO3 to pH <2

Lesly Wall  
CHPRC

WDRN425

Relinquished By <b>Ed Kauer /CHPRC</b>	Print <i>Ed Kauer</i>	Sign <i>Ed Kauer</i>	Date/Time <b>9-20-16 11:00</b>	Received By <b>SSU-1</b>	Print <i>Lesly Wall</i>	Sign <i>Lesly Wall</i>	Date/Time <b>9-20-16 11:00</b>	Matrix *
Relinquished By <b>SSU-1</b>	Print <i>Lesly Wall</i>	Sign <i>Lesly Wall</i>	Date/Time <b>SEP 21 2016 09:50</b>	Received By <b>Lesly Wall</b>	Print <i>Lesly Wall</i>	Sign <i>Lesly Wall</i>	Date/Time <b>SEP 21 2016 09:50</b>	Matrix *
Relinquished By <b>Lesly Wall CHPRC</b>	Print <i>Lesly Wall</i>	Sign <i>Lesly Wall</i>	Date/Time <b>SEP 21 2016 09:10</b>	Received By <b>TARL J Anderson</b>	Print <i>TARL J Anderson</i>	Sign <i>TARL J Anderson</i>	Date/Time <b>SEP 21 2016 09:10</b>	Matrix *
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *

PRINTED ON 8/10/2016

FSR ID = FSR31489

A-6004-842 (REV 2)

17 of 104

11/15/2016

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

Date Time Received: 9/21/160910Container GM Screen Result: (Airlock) 0 cpm Initials A  
Sample GM Screen Result (Sample Receiving) 0 cpm Initials AClient: PGW SDG #: W07425 SAF #: S16-009 NA [ ]Lot Number: J6I220417Chain of Custody # S16-009-159Shipping Container ID or Air Bill Number: \_\_\_\_\_ NA A

Samples received inside shipping container cooler box

Yes A Continue with 1 through 4. Initial appropriate response.  
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact?
2. Custody Seals dated and signed?
3. Cooler temperature:
4. Vermiculite/packing materials is

Yes [ ] No [ ] No Custody Seal A  
 Yes [ ] No [ ] No Custody Seal A  
39 °C ICE NA [ ]  
 NA [ ] Wet A Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes A No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1x500mLP; 12xLP

8. Sample holding times exceeded? NA [ ] Yes [ ] No A
9. Samples have: tape hazard labels custody seals appropriate sample labels

Matrix: A (FLT, Wipe, Solid, Soil) A I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)

10. Samples: A are in good condition \_\_\_\_\_ are leaking \_\_\_\_\_ are broken  
 \_\_\_\_\_ have air bubbles (Only for samples requiring no head space) \_\_\_\_\_ Other \_\_\_\_\_

11. Sample pH appropriate for analysis requested Yes A No [ ] NA [ ]  
 (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)

12. Were any anomalies identified in sample receipt? Yes [ ] No A
13. Description of anomalies (include sample numbers): NA A

14. Sample Location, Sample Collector Listed on COC? \* Yes A No [ ]  
 \*For documentation only. No corrective action needed.

15. Additional Information: N/A

[ ] Client Courier denied temperature check. A Client Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:  
 Signature: J. Anderson

Date: 09/21/16

Client Notification needed? Yes [ ] No F Date: \_\_\_\_\_  
 By: \_\_\_\_\_  
 Person contacted: \_\_\_\_\_

F No action necessary; process as is

Project Manager Stm Cym Date 9/26/16

CH2MHill Plateau Remediation  
Company

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

116-018-013

Page 1 of 1

Collector	Dave Floyd CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	116-018	Sampling Origin	Hanford Site	Purchase Order/Charge Code	3000071
Project Title	200UPI, APRIL 2016	Logbook No.	HNF-N-506 871 / 18	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1					
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis
B34KC6	N	W SEP 21 2016 / (27)	1x1-L P	906.0 TRITIUM_LSC: COMMON	M 89D3
				Holding Time	Preservative
				6 Months	None

11/15/2016

REV. 1



Relinquished By Dave Floyd CHPRC	Print <i>Lesley Wall</i>	Sign <i>Lesley Wall</i>	Date/Time SEP 21 2016 12:10	Received By Lesley Wall CHPRC	Print <i>Lesley Wall</i>	Date/Time SEP 21 2016 12:00	Date/Time SEP 21 2016 12:10	Matrix *
Relinquished By Lesley Wall CHPRC			Date/Time SEP 21 2016 14:30	Received By J. Bock, TARL		Date/Time SEP 21 2016 14:30	Date/Time SEP 21 2016 14:30	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			Date/Time	Received By		Date/Time	Date/Time	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By			Date/Time	Received By		Date/Time	Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By				

Date/Time

A-6004-842 (REV 2)

FSR ID = FSR25464

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

Date/Time Received: 9-21-14 / 1430 Container GM Screen Result: (Airlock) 8 cpm Initials [ B ]  
Sample GM Screen Result (Sample Receiving) 8 cpm Initials [ B ]Client: Rew SDG #: W07425 SAF #: I14-018 NA [ B ]Lot Number: J6I220418Chain of Custody #: I14-018-013Shipping Container ID or Air Bill Number: \_\_\_\_\_ NAB [ B ]Samples received inside shipping container cooler box  
Yes [ B ] Continue with 1 through 4. Initial appropriate response.  
No [ B ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ B ] No [ B ] No Custody Seal [ B ]  
 2. Custody Seals dated and signed? Yes [ B ] No [ B ] No Custody Seal [ B ]  
 3. Cooler temperature: 6.0 °C NA [ B ]  
 4. Vermiculite/packing materials is NA [ B ] Wet [ B ] Dry [ B ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ B ] No [ B ]  
 6. Number of samples received (Each sample may contain multiple bottles): 1  
 7. Containers received: I14

8. Sample holding times exceeded? NA [ B ] Yes [ B ] No [ B ]  
 9. Samples have: tape hazard labels custody seals appropriate sample labels  
 10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)

11. Samples:  
B are in good condition are leaking are broken  
B have air bubbles (Only for samples requiring no head space) Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [ B ] No [ B ] NA [ B ]  
 (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)

13. Were any anomalies identified in sample receipt? Yes [ B ] No [ B ]

14. Description of anomalies (include sample numbers): NA [ B ] \_\_\_\_\_

15. Sample Location, Sample Collector Listed on COC? \* Yes [ B ] No [ B ]  
 \*For documentation only. No corrective action needed.

16. Additional Information: ✓/B

[ B ] Client Courier denied temperature check. B Client Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:  
 Signature: Heidi Bach Date: 9-21-14

Client Notification needed? Yes [ B ] No [ B ] Date: \_\_\_\_\_  
 By: \_\_\_\_\_  
 Person contacted: \_\_\_\_\_

B No action necessary; process as is

Project Manager Steve Cupm Date 9126116

## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

S16-004-320

Page 1 of 1

Collector	Dave Floyd CHPRC	Contact/Requester	Karen Waters-Husted
SAF No.	S16-004	Sampling Origin	Hanford Site
Project Title	SURV, APRIL 2016	Logbook No.	HNF-N-5068 9/18
Shipped To (Lab)	Test America Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE
Protocol	CERCLA	Priority:	30 Days
POSSIBLE HAZARDS/REMARKS			
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			

## POSSIBLE HAZARDS/REMARKS

\*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter *	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B34MB5	N	W	SEP 21 2016	1/27	1x1-L G/P	6 Months	HNO3 to pH <2
B34MB5	N	W			2x1-L G/P	6 Months	None
B34MB5	N	W			C14_LSC: COMMON	6 Months	HNO3 to pH <2
B34MB5	N	W			GAMMA_GS: COMMON; GAMMA_GS: GW 01	6 Months	HNO3 to pH <2
B34MB5	N	W			PU241_I_E_LSC: COMMON	6 Months	HNO3 to pH <2
B34MB5	N	W			3x1-L G/P	6 Months	HNO3 to pH <2
B34MB5	N	W			1x1-L G/P	6 Months	HNO3 to pH <2
B34MB5	N	W			PUISO_PLATE_AEA: COMMON	6 Months	HNO3 to pH <2
B34MB5	N	W			2x1-L G/P	6 Months	HNO3 to pH <2
B34MB5	N	W			SE79_SEP_I_E_LSC: COMMON	6 Months	HNO3 to pH <2
B34MB5	N	W			3x1-L G/P	6 Months	HNO3 to pH <2
B34MB5	N	W			SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B34MB5	N	W			1x500-mL P	6 Months	HCl to pH <2
B34MB5	N	W	SEP 21 2016	1/27	1x1-L G/P	6 Months	HNO3 to pH <2
B34MB5	N	W			UIISO_PLATE_AEA: COMMON	6 Months	HNO3 to pH <2

Sept 22 2016  
20160925



Relinquished By <b>Dave Floyd CHPRC</b>	Print 	Sign 	Date/Time <b>SEP 21 2016 12:00</b>	Received By <b>Lesley West CHPRC</b>	Print 	Sign 	Date/Time <b>SEP 21 2016 12:00</b>
Relinquished By <b>Lesley West CHPRC</b>	Print 	Sign 	Date/Time <b>SEP 21 2016 14:30</b>	Received By <b>J. Bock, TARL</b>	Print 	Sign 	Date/Time <b>SEP 21 2016 14:30</b>
Relinquished By <b>J. Bock, TARL</b>	Print 	Sign 	Date/Time <b>SEP 21 2016 14:30</b>	Received By <b>Lesley West</b>	Print 	Sign 	Date/Time <b>SEP 21 2016 12:00</b>
Relinquished By <b>Lesley West</b>	Print 	Sign 	Date/Time <b>SEP 21 2016 12:00</b>	Received By <b>CH2MHill Plateau Remediation Company</b>	Print 	Sign 	Date/Time <b>SEP 21 2016 12:00</b>

FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process)  
DISPOSITION

Disposed By

Date/Time

Date/Time

FSR ID = FSR25464  
PRINTED ON 6/28/2016

A-6004-842 (REV 2)

REV. 1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Date Time Received: 9-21-16 / 1430 Container GM Screen Result: (Airlock) 8 cpm Initials [ ]Sample GM Screen Result (Sample Receiving) 8 cpm Initials [ ]Client: PLW SDG #: W07425 SAF #: S16-004 NA [ ]Lot Number: J6I220419Chain of Custody # S16-004-320

Shipping Container ID or Air Bill Number: \_\_\_\_\_ NA [ ]

Samples received inside shipping container/cooling box  
Yes [ ] Continue with 1 through 4. Initial appropriate response.  
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: 6.0 °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): \_\_\_\_\_
7. Containers received: 1 + 500 ml; 16x4

8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: \_\_\_\_\_ tape \_\_\_\_\_ hazard labels \_\_\_\_\_ custody seals \_\_\_\_\_ appropriate sample labels
10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)

11. Samples:  
✓ are in good condition      \_\_\_\_\_ are leaking      \_\_\_\_\_ are broken  
✓ have air bubbles (Only for samples requiring no head space)      \_\_\_\_\_ Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]  
 (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ] \_\_\_\_\_

15. Sample Location. Sample Collector Listed on COC? \* Yes [ ] No [ ]  
 \*For documentation only. No corrective action needed.
16. Additional Information: ✓/A

[ ] Client Courier denied temperature check. ✓ Client Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:

Signature: John Bach Date: 9-21-16Client Notification needed? Yes [ ] No [ 8 ] Date: \_\_\_\_\_  
By: \_\_\_\_\_

Person contacted: \_\_\_\_\_

✓ No action necessary; process as isProject Manager GTM CyPM Date 9/26/16

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

**C.O.C. #** X16-053-018

Page 1 of 1

Collector	Ed Kauer CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-053	Sampling Origin	Hanford Site	Purchase Order/Charge Code	3000071 304121
Project Title	ERDF, SEPTEMBER 2016	Logbook No.	HNF-N-506 82 / / Q	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.
SPECIAL INSTRUCTIONS					
			Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
N/A Special Handling:N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS					
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 4581.					
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis
B36BM0	N	W	SEP 22 2016 /0008	2x1-L GIP	C14_LSC: COMMON
B36BM0	N	W	SEP 22 2016 /0008	1x1-L GIP	RATOT_AEAGEA. COMMON m89Lw

11/15/2016

REV. 1

JUL 24 2016  
WONAS

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Ed Kauer CHPRC			SEP 22 2016 1035	Janelle Zunker CHPRC			SEP 22 2016 1035	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Janelle Zunker CHPRC			SEP 22 2016 1450	Received By J. Bock, TARL			SEP 22 2016 1450	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
PRINTED ON 8/3/2016			A-6004-842 (REV 2)

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **X16-053-012**

Page 1 of 1

Collector	Ed Kauer ICPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-053	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071-304121 WME-091114
Project Title	ERDF, SEPTEMBER 2016	Logbook No.	HNF-N-506 89/ 19	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.
SPECIAL INSTRUCTIONS					
Hold Time					
Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Preservative					
Sample Analysis					
Holding Time					

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 4581.1

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 4581.1

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36BL1	N	W	SEP 22 2016	1214	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B36BL1	N	W			2x1-L G/P	C14_LSC: COMMON	6 Months	None
B36BL1	N	W			4x1-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B36BL1	N	W			1x1-L G/P	RATOT_AEAGEA: COMMON	6 Months	HNO3 to pH <2
B36BL1	N	W			1x500-ml P	TC99_ETVDSK_LSC: COMMON 118917	6 Months	HCl to pH <2

Sept 2016

wonkaS

Relinquished By	Print <u>Shelly Wall</u> Sign <u>Shelly Wall</u> Date/Time <u>SEP 22 2016 1250</u>	Received By	Print <u>Lesly Wath</u> Sign <u>Lesly Wath</u> Date/Time <u>SEP 22 2016 1450</u>	Date/Time	1250	Matrix *
Relinquished By	<u>Ed Kauer</u> <u>ICPRC</u>	Received By	<u>J. Bock, TARL</u>	Date/Time	1450	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By		Received By	<u>J. Bock</u>	Date/Time		DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wine L = Liquid V = Vegetation X = Other
Relinquished By		Received By		Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By		Date/Time		

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**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

**C.O.C. #**  
**X16-053-010**

Page 1 of 1

Collector	Ed Kauer ICNPRC	Contact/Requester	Karen Waters-Husted
SAF No.	X16-053	Sampling Origin	Hanford Site
Project Title	ERDF, SEPTEMBER 2016	Logbook No.	HNF-N-506 89 / 19
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE
Protocol	CERCLA	Priority:	30 Days
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 4581. Goods Regulations but are not releasable per DOE Order 4581.			

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 4581.

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B36BK5	N	W	SEP 22 2016	/23	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B36BK5	N	W			2x1-L GIP	C14_LSC: COMMON	6 Months	None
B36BK5	N	W			4x1-L GIP	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B36BK5	N	W			1x1-L GIP	RATOT_AEAGEA: COMMON	6 Months	HNO3 to pH <2
B36BK5	N	W			1x500-mL P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2

11/15/2016

REV. 1

Relinquished By Ed Kauer ICNPRC	Print <i>Lesly Wall</i>	Sign	SEP 22 2016	Date/Time 1250	Received By Lesly Wall ICNPRC	Print <i>J. Bock, TARL</i>	Sign	SEP 22 2016	Date/Time 1250	Matrix *
Relinquished By Lesly Wall ICNPRC				Date/Time 1450	Received By J. Bock, TARL				Date/Time 1450	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By				Date/Time	Received By				Date/Time	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By				Date/Time	Received By				Date/Time	
PRINTED ON 8/3/2016	FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time	FSR ID = FSR34773	A-6004-842 (REV 2)	Page 25 of 104	Page 25 of 104	Page 25 of 104	Page 25 of 104

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. #

**X16-053-014**

Page 1 of 1

Collector	Ed Kauer KCHPRC	Contact/Requester	Karen Waters-Husted
SAF No.	X16-053	Sampling Origin	Hanford Site
Project Title	ERDF, SEPTEMBER 2016	Logbook No.	HNF-N-506 84/ 19
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE
Protocol	CERCLA	Priority:	30 Days

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36BL2	N	W	SEP 22 2016	1214	1x1-L P	9310_ALPHABETA_GPC: COMMON	HNO3 to pH <2
B36BL2	N	W			2x1-L G/P	C14_LSC: COMMON	None
B36BL2	N	W			4x1-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	None
B36BL2	N	W			1x1-L G/P	RATOT_AEAGEA: COMMON	HNO3 to pH <2
B36BL2	N	W			1x500-ml P	TC99_ETVDSK_LSC: COMMON	HCl to pH <2
					YMA9L1	6 Months	

11/15/2016

REV. 1

Relinquished By	Print Name	Sign	Date/Time	Received By	Print Name	Date/Time	Matrix *
Ed Kauer KCHPRC		SEP 22 2016	1250	Lesly Wall KCHPRC		SEP 22 2016	S = Soil
Relinquished By	Print Name	Sign	Date/Time	Received By	Print Name	Date/Time	DS = Drum Solids
Lesly Wall KCHPRC		SEP 22 2016	1450		J. Bock, TARL	SEP 22 2016 1450	SE = Sediment
Relinquished By	Print Name	Sign	Date/Time	Received By	Print Name	Date/Time	SO = Solid
							SL = Sludge
Relinquished By	Print Name	Sign	Date/Time	Received By	Print Name	Date/Time	W = Water
							O = Oil
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Received By		Date/Time	A = Air
							X = Vegetation

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

**X16-053-016**

Page 1 of 1

Collector	Ed Kauer /CHPRC	Contact/Requester	Karen Waters-Husted					
SAF No.	X16-053	Sampling Origin	Hanford Site					
Project Title	ERDF, SEPTEMBER 2016	Logbook No.	HNF-N-506 89 / 19					
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE					
Protocol	CERCLA	Priority:	30 Days					
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS						
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		N/A Special Handling: N/A						
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Hold Time	Holding Time	Preservative
B36BL9	N	SEP 22 2016	0800	1x1-L P	9310_ALPHABETA_GPC: COMMON		6 Months	HNO3 to pH <2
B36BL9	N	W		2x1-L G/P	C14_LSC: COMMON		6 Months	None
B36BL9	N	W		4x1-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON		6 Months	None
B36BL9	N	W		1x1-L G/P	RATOT_AEAGEA: COMMON		6 Months	HNO3 to pH <2
B36BL9	N	W		1x500-ml P	TC99_ETVDSK_LSC: COMMON		6 Months	HCl to pH <2

11/15/2016

REV. 1

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Date/Time	Matrix *
Ed Kauer /CHPRC			SEP 22 2016 0835	Janelle Zunker CHPRC			SEP 22 2016 1035	S	Soil
Relinquished By			Date/Time	Received By			Date/Time	SE	Sediment
Janelle Zunker CHPRC			SEP 22 2016 1450		J. Bock, TARL		SEP 22 2016 1450	SO	Solid
Relinquished By			Date/Time	Received By			Date/Time	SL	Sludge
								W	Water
Relinquished By			Date/Time	Received By			Date/Time	O	Oil
								A	Air
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time		

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. #

**X16-053-019**

Page 1 of 1

Collector	Ed Kauer /CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-053	Sampling Origin	Hanford Site	Purchase Order/Charge Code	3000074-304121 Lesly Wall /CHPRC
Project Title	ERDF, SEPTEMBER 2016	Logbook No.	HNF-N-506 89/1q	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.
				SPECIAL INSTRUCTIONS	Hold Time
					Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36BM6	N	W	SEP 22 2016	1315	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B36BM6	N	W			2x1-L G/P	C14_LSC: COMMON	6 Months	None
B36BM6	N	W			4x1-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B36BM6	N	W			1x1-L G/P	RATOT_AEAGEA: COMMON	6 Months	HNO3 to pH <2
B36BM6	N	W			1x500-ml P	TC99_ETVDSK_LSC: COMMON W\89L3	6 Months	HCl to pH <2

11/15/2016

REV. 1

Relinquished By Ed Kauer /CHPRC	Print <i>Ed Kauer</i>	Sign <i>Ed Kauer</i>	Date/Time 9-22-16 1405	Received By Lesly Wall /CHPRC	Print <i>Lesly Wall</i>	Date/Time 9-22-16 1405	Date/Time 9-22-16 1405	Matrix *
Relinquished By Lesly Wall /CHPRC	Print <i>Lesly Wall</i>	Sign <i>Lesly Wall</i>	Date/Time SEP 22 2016 1450	Received By J. Bock, TART	Print <i>J. Bock</i>	Date/Time SEP 22 2016 1450	Date/Time SEP 22 2016 1450	Matrix *
Relinquished By			Date/Time	Received By		Date/Time		
Relinquished By			Date/Time	Received By		Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Received By	Disposed By		Date/Time		

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11/15/2016

## Sample Check-in List

Date/Time Received: 9-23-16 | 1450 Container GM Screen Result: (Airlock) O cpm Initials B  
 Sample GM Screen Result (Sample Receiving) O cpm Initials B

Client: Rew SDG #: W07425 SAF #: X14-053 NA [ ]

Lot Number: J6I240401

Chain of Custody # X14-053-012, 010, 014, 016, 018, 019

Shipping Container ID or Air Bill Number: NA [ ]

Samples received inside shipping container/cooler/box  
 Yes [ ] Continue with 1 through 4. Initial appropriate response.  
 No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: 6.56 °C I.C. NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 6
7. Containers received: 5x500 ml, 43x4L

8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: \_\_\_\_\_ tape hazard labels custody seals appropriate sample labels

10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)

11. Samples:  
B are in good condition \_\_\_\_\_ are leaking \_\_\_\_\_ are broken  
 have air bubbles (Only for samples requiring no head space) \_\_\_\_\_ Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]  
 (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)

13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]

14. Description of anomalies (include sample numbers): NA [ ]

15. Sample Location, Sample Collector Listed on COC? \* Yes [ ] No [ ]  
 \*For documentation only. No corrective action needed.

16. Additional Information: V/P

[ ] Client/Courier denied temperature check. B [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:

Signature: John Beck Date: \_\_\_\_\_

Client Notification needed? Yes [ ] No [ ] Date: \_\_\_\_\_  
 By: \_\_\_\_\_  
 Person contacted: \_\_\_\_\_

B No action necessary; process as is

Project Manager Sgtm Cyrus Date 9/26/16

**Ritari, Whitney**

---

**From:** Fitzgerald, Scot L <Scot\_L\_Fitzgerald@rl.gov>  
**Sent:** Tuesday, September 27, 2016 1:06 PM  
**To:** Ritari, Whitney  
**Cc:** Medley, Heather A; Nagel, Sarah E; Ayres, Doris E; ^CPP Sample Management  
**Subject:** SAF X16-053 correction request

Whitney, Steven

The following issue has been identified by SMR: SAF number X16-053 was erroneously issued under the incorrect charge code 300071. Since this issue covers multiple sample numbers and SDGs, using the routine SIR process to address it is not practical. We are asking the lab use the instructions in this email in lieu of a SIR as follows:

- 1) Correct the CACN from 300071 to 304121 on all (current and future) COCs related to this SAF.  
-The current effected COCs with [TARL](#) are X16-053-010, X16-053-011, X16-053-012, X16-053-013, X16-053-014, X16-053-015, X16-053-016, X16-053-017, X16-053-018, X16-053-019, X16-053-020 and X16-053-021
- 2) Include a copy of this email in all effected data packages.

If you have any questions please let me know.

Scot Fitzgerald  
Analytical Support Group  
Soil & Groundwater Remediation Project (S&GRP)  
Phone: (509) 373-7495



## CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

S16-009-167

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11/15/2016

REV. 1

Collector <b>Ed Kauer</b> <b>IChPRC</b>	SAF No. S16-009	Project Title SURV, SEPTEMBER 2016	Shipped To (Lab) TestAmerica Incorporated, Richland	Protocol SURV	Contact/Requester Karen Waters-Husted	Sampling Origin Hanford Site	Logbook No. HNF-N-506 89 / 1Q	Method of Shipment GOVERNMENT VEHICLE	Priority: 30 Days	<b>PRIORITY</b>	SPECIAL INSTRUCTIONS N/A Special Handling: N/A	Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 4581										Sample Analysis	Holding Time	Preservative	
Sample No.	Filter	*	Date	Time	No/Type Container	906_0_TRITIUM_LSC: COMMON	6 Months	None					
B36H06	N	W	SEP 22 2016	1008	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2					
B36H06	N	W			1x1-L P	1129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None					
B36H06	N	W			4x1-L G/P	TC99_ETVDSK_LSC: COMMON	6 Months	HCl to pH <2					
B36H06	N	W			1x500-mL P	M39LQ							

#### Possible Sample Hazards/Remarks

Goods Regulations but are not releasable per BOE Order 458 |

THE JOURNAL OF CLIMATE

Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis		Holding Time	Preservative
					*			
B36H06	N	W SEP 22 2016	1008	1x1-L P	906_0_TRITIUM_LSC: COMMON		6 Months	None
B36H06	N	W		1x1-L P	9310_ALPHABETA_GPC: COMMON		6 Months	HNO3 to pH <2
B36H06	N	W		4x1-L G/P	1129LL_SEP_LEPS_GS_LL: COMMON		6 Months	None
B36H06	N	W		1x500-mL P	TC99_ETVDSK_LSC: COMMON	M 89LA	6 Months	HCl to pH <2

Schwarzer  
Sohnein

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CH2MHill Plateau Remediation  
Company

C.O.C. #  
**S16-009-279**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

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11/15/2016

REV. 1

Collector	Dan Woehle CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-009	Sampling Origin	Hanford Site	Purchase Order/Charge Code	3000071
Project Title	SURV, SEPTEMBER 2016	Logbook No.	HNF-N-506 70/ P	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	<b>PRIORITY</b>	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 4581					
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis
B36M18	N	W 9.22.16	1139	1x1-L P	906.0 TRITIUM_LSC: COMMON
B36M18	N	W 9.23.16	1139	3x1-L GIP	SRISO_SEP_PRECIP_GPC: COMMON M8amn

Preservative

Holding Time

Sample Analysis

No/Type Container

Preservative

Holding Time

Sample Analysis

No/Type Container

Preservative

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DOES  
NOT  
RELEASE



Relinquished By	Firm	Sign	Date/Time	Received By	Date/Time	Sign	Date/Time	Matrix *
Dan Woehle CHPRC		SEP 22 2016	12:10	Janelle Zunker CHPRC		SEP 22 2016	12:10	Soil DS
Janelle Zunker CHPRC		SEP 22 2016	1450	Received By J. Bock, TARL		SEP 22 2016	1450	Sediment DL
Relinquished By			Date/Time	Received By	Date/Time	Sign	Date/Time	
Relinquished By			Date/Time	Received By	Date/Time	Sign	Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time	
PRINTED ON	9/19/2016							A-6004-842 (REV 2)

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FSR ID = FSR35480

Date/Time

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

11/15/2016

**Sample Check-in List**

Date/Time Received: 9-22-16 | 1450 Container GM Screen Result: (Airlock) O cpm Initials [ ]  
 Sample GM Screen Result (Sample Receiving) O cpm Initials [ ]

Client: PLW SDG #: WD7425 SAF #: S14-009 NA [ ]

Lot Number: J6I260405

Chain of Custody # S14-009-167; 279

Shipping Container ID or Air Bill Number: \_\_\_\_\_ NA [ ]

Samples received inside shipping container cooler box  
 Yes [ ] Continue with 1 through 4. Initial appropriate response.  
 No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: 6.5 °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 2
7. Containers received: 1x 500ml, 10x 40

8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: \_\_\_\_\_ tape hazard labels custody seals appropriate sample labels

10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)

11. Samples:  
✓ are in good condition \_\_\_\_\_ are leaking \_\_\_\_\_ are broken  
✓ have air bubbles (Only for samples requiring no head space) \_\_\_\_\_ Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]  
 (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)

13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]

14. Description of anomalies (include sample numbers): NA [ ]

15. Sample Location, Sample Collector Listed on COC? \* Yes [ ] No [ ]  
 \*For documentation only. No corrective action needed.

16. Additional Information ✓/15

[ ] Client Courier denied temperature check.

✓ Client Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:

Signature: John Dach Date: \_\_\_\_\_

Client Notification needed? Yes [ ] No Not Date: \_\_\_\_\_

By: \_\_\_\_\_

Person contacted: \_\_\_\_\_

✓ No action necessary; process as is

Project Manager Sgtm Cope M Date 9/26/16

CH2MHill Plateau Remediation  
Company

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. #  
**S16-009-294**

Page 1 of 1

Collector	Scott King CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650	
SAF No.	S16-009	Sampling Origin	Hanford Site	Purchase Order/Charge Code	3000071	
Project Title	SURV, SEPTEMBER 2016	Logbook No.	HNF-N-506 <u>87135</u>	Ice Chest No.	N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A	
Protocol	SURV	Priority:	30 Days	PRIORITY	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			N/A			Preservative
Sample No.	Filter *	Date	Time <u>729:31</u>	No/Type Container <u>1x1-L P</u>	Sample Analysis <u>906.0 TRITIUM_LSC: COMMON 10898F</u>	Holding Time <u>6 Months</u>
B36M56	N	SEP 23 2016	<u>113</u>			None
1112						

Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Holding Time
B36M56	N	SEP 23 2016	<u>113</u>	1x1-L P	906.0 TRITIUM_LSC: COMMON 10898F	6 Months
1112						



Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Scott King CHPRC			SEP 23 2016 12:00	Troy Bacon CHPRC			SEP 23 2016 12:00	S = Soil
Troy Bacon CHPRC			SEP 23 2016 15:00	L Anderson, TARI			SEP 23 2016 15:00	SE = Sediment
Relinquished By			Date/Time	Received By			Date/Time	DS = Drum Solids
Relinquished By			Date/Time	Received By			Date/Time	DL = Drum Liquids
Relinquished By			Date/Time	Received By			Date/Time	T = Tissue
Relinquished By			Date/Time	Received By			Date/Time	WI = Wipe
Relinquished By			Date/Time	Received By			Date/Time	L = Liquid
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Date/Time	Received By			Date/Time	V = Vegetation
PRINTED ON	8/11/2016		Date/Time	Disposed By			Date/Time	A = Other

FSR ID = FSR31609	Date/Time
PRINTED ON	8/11/2016
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)
PRINTED ON	8/11/2016
FSR ID = FSR31609	Date/Time
PRINTED ON	8/11/2016
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)
PRINTED ON	8/11/2016

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

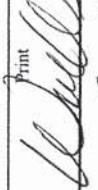
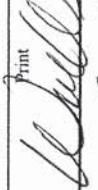
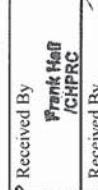
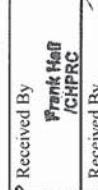
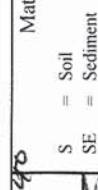
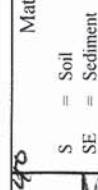
C.O.C. #  
**S16-009-315**

Page 1 of 1

Collector	Will Wise CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-009	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, SEPTEMBER 2016	Logbook No.	HNF-N-506 90 / 9	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	30 Days	PRIORITY	Offsite Property No.
			SPECIAL INSTRUCTIONS		Hold Time
			N/A		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>					
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1					
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis
B36MF9	N	W SEP 23 2016	0851	1x1-L P	906.0 TRITIUM_LSC: COMMON M 59R5
					Holding Time
				6 Months	Preservative
					None

11/15/2016

REV. 1

Relinquished By Will Wise CHPRC	Print 	Sign 	Date/Time SEP 23 2016	Received By Frank Hall CHPRC	Print 	Sign 	Date/Time SEP 23 2016	Matrix *
Relinquished By Frank Hall CHPRC	Print 	Sign 	Date/Time SEP 23 2016	Received By LARL Anderson	Print 	Sign 	Date/Time SEP 23 2016	Matrix *
Relinquished By				Received By				
Relinquished By				Received By				
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Received By				Date/Time
PRINTED ON	8/15/2016			Received By				Disposed By
								Date/Time

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **S16-009-295**

Page 1 of 1

Collector	Scott King CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-009	Sampling Origin	Hanford Site	Purchase Order/Charge Code	3000071
Project Title	SURV, SEPTEMBER 2016	Logbook No.	HNF-N-506 87/2D	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	30 Days	PRIORITY	Offsite Property No.

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter	Filter *	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36M58	N	W	SEP 23 2016	0903	1x1-L P	906.0 TRITIUM_LSC: COMMON	6 Months	None
B36M58	N	W			1x1-L G/P	AMCMISO_EIE_PRECIP_AEA: COMMON	180 Days	HNO3 to pH <2
B36M58	N	W			2x1-L G/P	C14_LSC: COMMON	6 Months	None
B36M58	N	W			3x1-L G/P	GAMMA_GS: COMMON; GAMMA_GS: GW 01	6 Months	HNO3 to pH <2
B36M58	N	W			3x1-L G/P	PU241_I_E_LSC: COMMON	6 Months	HNO3 to pH <2
B36M58	N	W			1x1-L G/P	PUISO_I_E_PRECIP_AEA: COMMON	180 Days	HNO3 to pH <2
B36M58	N	W			2x1-L G/P	SE79_SEP_I_E_LSC: COMMON	6 Months	HNO3 to pH <2
B36M58	N	W			1x500-ml P	TC99_EVTDSK_LSC: COMMON	6 Months	HCl to pH <2
B36M58	N	W	SEP 23 2016	0903	1x1-L G/P	UIISO_I_E_PRECIP_AEA: COMMON	6 Months	HNO3 to pH <2

Sept 26 0414  
WDN425

Relinquished By Scott King CHPRC	Print 	Sign 	Date/Time SEP 23 2016 1005	Received By Frank Hall CHPRC	Print 	Sign 	Date/Time SEP 23 2016 1005	Matrix *
Relinquished By Frank Hall CHPRC	Print 	Sign 	Date/Time SEP 23 2016 1005	Received By L Anderson, TARI	Print 	Sign 	Date/Time SEP 23 2016 1005	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air V = Vegetation X = Other
Relinquished By				Received By				
Relinquished By				Date/Time				
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time	Received By	Received By	Date/Time	Received By	Date/Time

PRINTED ON	8/11/2016	FSR ID = FSR31610
Date/Time	Date/Time	Date/Time

Date/Time  
Total Activity Exemption: Yes  No

A-6004-842 (REV 2)

Date/Time  
Disposed By

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**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

Date Time Received: 09/23/16

1505

Container GM Screen Result: (Airlock) 0 cpm Initials [A]  
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [A]

Client: PGW

SDG #: WO7625

SAF #: S16-009

NA [ ]

Lot Number: J6I240414

Chain of Custody # S16-009-295; 294; 315

Shipping Container ID or Air Bill Number : NA [A]

Samples received inside shipping container cooler box

Yes [A] Continue with 1 through 4. Initial appropriate response.  
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ]
3. Cooler temperature: 60.7 °C ICE NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [A] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present?

Yes [A] No [ ]

6. Number of samples received (Each sample may contain multiple bottles): 3

7. Containers received: 1x500ml; 1x1L

8. Sample holding times exceeded? NA [ ] Yes [ ] No [A]
9. Samples have: tape hazard labels custody seals appropriate sample labels
10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)
11. Samples: [A] are in good condition \_\_\_\_\_ are leaking \_\_\_\_\_ are broken  
\_\_\_\_\_ have air bubbles (Only for samples requiring no head space) \_\_\_\_\_ Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]  
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)

13. Were any anomalies identified in sample receipt? Yes [ ] No [A]

14. Description of anomalies (include sample numbers): NA [A]

15. Sample Location, Sample Collector Listed on COC? \* Yes [A] No [ ]  
\*For documentation only. No corrective action needed.

16. Additional Information: N/A

[ ] Client Courier denied temperature check.

[A] Client Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:  
Signature: J. Anderson

Date: 09/23/16

Client Notification needed? Yes [ ] No [A] Date: \_\_\_\_\_  
By: \_\_\_\_\_  
Person contacted: \_\_\_\_\_

[A] No action necessary; process as is

Project Manager Stm Cpm Date 9/27/16



**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

**C.O.C. #**  
**116-030-170**

Page 1 of 1

Collector	Will Wise CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	116-030	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100NR2-GW OU MONITORING, SEPT	Logbook No.	HNF-N-506 90 / 9	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.
			SPECIAL INSTRUCTIONS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
			Hold Time		Preservative
			Sample Analysis		
			Holding Time		
			6 Months		None

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
 \*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter	*	Date	Time	No/Type Container
B36MB8	N	W	SEP 23 2016	1304	1x1-L P
					906.0 TRITIUM_LSC: COMMON M89QK

11/15/2016

REV. 1

Troy L. Bacon  
Troy L. Bacon

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Relinquished By Will Wise CHPRC	Print <i>Will Wise</i>	Sign SEP 23 2016	Date/Time 1300	Received By Troy Bacon CHPRC	Print <i>Troy L. Bacon</i>	Sign SEP 23 2016	Date/Time 1350	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other	Matrix *
Relinquished By Troy Bacon CHPRC	Print <i>Troy L. Bacon</i>	Sign SEP 23 2016	Date/Time 1505	Received By L. Anderson, TARI CHPRC	Print <i>L. Anderson, TARI</i>	Sign SEP 23 2016	Date/Time 1505	SE = Soil SO = Sediment SL = Solid WI = Sludge W = Water L = Oil V = Air	DS = Drum Liquids DL = Tissue T = Wipe WI = Liquid V = Vegetation X = Other	
Relinquished By Troy Bacon CHPRC	Print <i>Troy L. Bacon</i>	Sign SEP 23 2016	Date/Time 1505	Received By T. Johnson CHPRC	Print <i>T. Johnson</i>	Sign SEP 23 2016	Date/Time 1505	SE = Soil SO = Sediment SL = Solid WI = Sludge W = Water L = Oil V = Air	DS = Drum Liquids DL = Tissue T = Wipe WI = Liquid V = Vegetation X = Other	
Relinquished By T. Johnson CHPRC	Print <i>T. Johnson</i>	Sign SEP 23 2016	Date/Time 1505	Received By Date/Time	Print <i>Date/Time</i>	Sign Date/Time	Date/Time	SE = Soil SO = Sediment SL = Solid WI = Sludge W = Water L = Oil V = Air	DS = Drum Liquids DL = Tissue T = Wipe WI = Liquid V = Vegetation X = Other	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Received By Date/Time	Disposed By Date/Time							

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PRINTED ON 8/15/2016  
FSR ID = FSR4117  
A-6004-842 (REV 2)

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

**C.O.C. #**

**116-030-093**

Page 1 of 1

Collector	Dave Floyd CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650		
SAF No.	116-030	Sampling Origin	Hanford Site	Purchase Order/Charge Code	3000071		
Project Title	100NR2-GW OU MONITORING, SEPT	Logbook No.	HNF-N-506 <u>891/20</u>	Ice Chest No.	N/A		
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A		
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.		
				SPECIAL INSTRUCTIONS	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
				Hold Time			
				Sample Analysis	Preservative		
B36CJ5	N	W	SEP 23 2016 6710	1x1-L P	906_0 TRITIUM_LSC: COMMON	6 Months	None
B36CJ5	N	W	SEP 23 2016 0710	3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON <u>M89QL</u>	6 Months	HNO3 to pH <2

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 4581.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36CJ5	N	W	SEP 23 2016 6710		1x1-L P	906_0 TRITIUM_LSC: COMMON	6 Months	None
B36CJ5	N	W	SEP 23 2016 0710		3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON <u>M89QL</u>	6 Months	HNO3 to pH <2

Relinquished By <u>Dave Floyd</u> CHPRC	Print <u>605</u>	Sign <u>Troy Bacon</u>	Date/Time SEP 23 2016 1200	Received By <u>Troy Bacon</u> CHPRC	Print <u>Troy Bacon</u>	Sign <u>Troy Bacon</u>	Date/Time SEP 23 2016 1200	Matrix *
Relinquished By <u>Troy Bacon</u> CHPRC	Print <u>605</u>	Sign <u>L. Anderson, TARI</u>	Date/Time SEP 23 2016 1505	Received By <u>L. Anderson, TARI</u>	Print <u>L. Anderson, TARI</u>	Sign <u>L. Anderson, TARI</u>	Date/Time SEP 23 2016 1505	Matrix *
Relinquished By				Received By				
Relinquished By				Received By				

FINAL SAMPLE Disposal Method (e.g., Return to customer, per lab procedure, used in process)  
DISPOSITION  
PRINTED ON 8/16/2016

Date/Time  
Disposed By  
Date/Time

CH2MHill Plateau Remediation  
Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **116-030-096**

Page 1 of 1

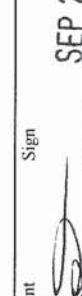
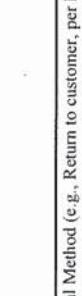
Collector	Dave Floyd CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	116-030	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100NR2-GW OU MONITORING, SEPT	Logbook No.	HNF-N-506 & 7 / 20	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	<b>30 Days</b>	<b>PRIORITY</b>	Offsite Property No.
			<b>SPECIAL INSTRUCTIONS</b>		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
			Hold Time		
			N/A		
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1					

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36CJ6	N	W	SEP 23 2016	132	1x1-L P	906.0_TRITIUM_LSC: COMMON	6 Months	None
B36CJ6	N	W	SEP 23 2016	132	3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON m89cm	6 Months	HNO3 to pH <2

DOES 2016  
WONAS

11/15/2016

REV. 1

Relinquished By <b>Dave Floyd CHPRC</b>	Print 	Sign 	Date/Time <b>SEP 23 2016 1200</b>	Received By <b>Troy Bacon CHPRC</b>	Print 	Sign 	Date/Time <b>SEP 23 2016 1200</b>	Matrix *
Relinquished By <b>Troy Bacon CHPRC</b>	Date/Time <b>SEP 23 2016 1505</b>	Received By <b>L Anderson, TARI</b>	Date/Time <b>SEP 23 2016 1505</b>	SO	SE	Soil	DS	Drum Solids
Relinquished By	Date/Time	Received By	Date/Time	SL	SO	Sediment	DL	Drum Liquids
Relinquished By	Date/Time	Received By	Date/Time	W	SL	Solid	T	Tissue
Relinquished By	Date/Time	Received By	Date/Time	O	W	Sludge	WI	Wipe
Relinquished By	Date/Time	Received By	Date/Time	A	O	Water	L	Liquid
Relinquished By	Date/Time	Received By	Date/Time		V	Oil	V	Vegetation
Relinquished By	Date/Time	Received By	Date/Time		A	Air	X	Other

Date/Time

Disposed By

A-6004-842 (REV 2)

FSR ID = FSR3034

**CH2MHill Plateau Remediation  
Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

**C.O.C. #** **116-030-074**

Page 1 of 1

Collector	Dave Floyd CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650	
SAF No.	116-030	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071	
Project Title	100NR2-GW OU MONITORING, SEPT	Logbook No.	HNF-N-506 <u>8/27/2016</u>	Ice Chest No.	N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A	
Protocol	CERCLA	Priority:	30 Days	PRIORITY	Offsite Property No.	N/A
				SPECIAL INSTRUCTIONS	Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
						Preservative
				Sample Analysis	Holding Time	
				906.0_TRITIUM_LSC: COMMON	6 Months	None
				SRISO_SEP_PRECIP_GPC: COMMON <u>M89RN</u>	6 Months	HNO3 to pH <2

**POSSIBLE SAMPLE HAZARDS/REMARKS**

\*\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36C94	N	W	SFP 23 2016 /007		1x1-L P	906.0_TRITIUM_LSC: COMMON	6 Months	None
B36C94	N	W	SFP 23 2016 /007		3x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON <u>M89RN</u>	6 Months	HNO3 to pH <2

11/15/2016  
WSD 1425

Relinquished By	Dave Floyd CHPRC	Print	<u>110</u>	Sign	<u>SEP 23 2016</u>	Date/Time	<u>1200</u>	Matrix *
Relinquished By	Troy Bacon CHPRC	Date/Time	<u>SEP 23 2016</u>	Received By	<u>Troy L. Bacon</u>	Date/Time	<u>SEP 23 2016</u>	S = Soil
Relinquished By		Date/Time	<u>SEP 23 2016</u>	Received By	<u>TARL Anderson</u>	Date/Time	<u>SEP 23 2016</u>	SE = Sediment
Relinquished By		Date/Time		Received By		Date/Time		SO = Solid
Relinquished By		Date/Time		Received By		Date/Time		SL = Sludge
Relinquished By		Date/Time		Received By		Date/Time		W = Water
Relinquished By		Date/Time		Received By		Date/Time		O = Oil
Relinquished By		Date/Time		Received By		Date/Time		A = Air
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time		Date/Time

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTS

Date Time Received: 09/23/16

1505

Container GM Screen Result: (Airlock) 0 cpm Initials [A]  
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [A]

Client: PGW

SDG #:

W01625

SAF #:

I14-030

NA [ ]

Lot Number: J61260417

Chain of Custody #: I14-030-093; 096; 074; 153; 170

Shipping Container ID or Air Bill Number: NA [A]

Samples received inside shipping container cooler box

Yes [A] Continue with 1 through 4. Initial appropriate response.  
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact?
2. Custody Seals dated and signed?
3. Cooler temperature:
4. Vermiculite packing materials is

Yes [ ] No [ ] No Custody Seal [A]  
 Yes [ ] No [ ] No Custody Seal [A]  
 6.7 °C ICE NA [ ]  
 NA [ ] Wet [A] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present?

Yes [A] No [ ]

6. Number of samples received (Each sample may contain multiple bottles): 5

7. Containers received: 14x6p

8. Sample holding times exceeded? NA [ ] Yes [ ] No [A]
9. Samples have: tape hazard labels custody seals appropriate sample labels
10. Matrix: A (FLT, Wipe, Solid, Soil) I (Water) S (Air, Niosh 7400) T (Biological, Ni-63)

11. Samples:

[A] are in good condition \_\_\_\_\_ are leaking \_\_\_\_\_ are broken  
 \_\_\_\_\_ have air bubbles (Only for samples requiring no head space) \_\_\_\_\_ Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [B] No [ ] NA [ ]
- 
- (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO
- <sub>3</sub>
- added and pH after addition on table)

13. Were any anomalies identified in sample receipt? Yes [ ] No [A]

14. Description of anomalies (include sample numbers): NA [A]

15. Sample Location. Sample Collector Listed on COC? \* Yes [A] No [ ]

\*For documentation only. No corrective action needed.

16. Additional Information: N/A

[ ] Client Courier denied temperature check.

[A] Client Courier unpack cooler.

Sample Check List completed by Sample Custodian:  
Signature: [A] Anderson

Date: 09/23/16

Client Notification needed? Yes [ ] No [B] Date: \_\_\_\_\_

By: \_\_\_\_\_

Person contacted: \_\_\_\_\_

No action necessary; process as is

Project Manager [Signature] Date 9/27/16

## Sample Results Summary

Date: 15-Nov-16

## TestAmerica Inc TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 69692

SDG No: W07625

Batch	Client Id Work Order	Parameter	Result +/- CSU ( 2 s)		Qual	Units	Tracer Yield	MDL	CRDL	RPD
<b>6273031 SRISO_SEP_PRECIP_GPC</b>										
	<b>B34MB5</b>									
	M89DK1AH	STRONTIUM	1.71E-02	+ - 7.3E-01	U	pCi/L	87%	1.33E+00	2.00E+00	
	<b>B36BB2</b>									
	M88491AD	STRONTIUM	2.61E+03	+ - 5.9E+02		pCi/L	90%	1.18E+00	2.00E+00	
	<b>B36C94</b>									
	M89PN1AC	STRONTIUM	2.01E+03	+ - 4.6E+02		pCi/L	86%	1.27E+00	2.00E+00	
	<b>B36CJ5</b>									
	M89PL1AC	STRONTIUM	1.59E-01	+ - 8.8E-01	U	pCi/L	73%	1.58E+00	2.00E+00	
	<b>B36CJ6</b>									
	M89PM1AC	STRONTIUM	1.01E+04	+ - 2.3E+03		pCi/L	89%	1.17E+00	2.00E+00	
	<b>B36M18</b>									
	M89MN1AC	STRONTIUM	7.68E+02	+ - 1.8E+02		pCi/L	83%	1.46E+00	2.00E+00	
	<b>B37147 DUP</b>									
	M9AJN1AG	STRONTIUM	2.24E+00	+ - 1.0E+00		pCi/L	91%	1.21E+00	2.00E+00	108.4
<b>6270063 PUISO_PLATE_AEA</b>										
	<b>B34MB5</b>									
	M89DK1AF	PU-238	-2.81E-02	+ - 4.0E-01	U	pCi/L	70%	8.52E-01	1.00E+00	
		PU239/40	-1.20E-02	+ - 4.0E-01	U	pCi/L	70%	7.65E-01	1.00E+00	
	<b>B36M17 DUP</b>									
	M87X81AN	PU-238	1.01E-01	+ - 3.3E-01	U	pCi/L	82%	8.25E-01	1.00E+00	709.1
		PU239/40	-9.80E-03	+ - 3.3E-01	U	pCi/L	82%	6.23E-01	1.00E+00	-69.6
	<b>B36M58</b>									
	M89PH1AG	PU-238	-2.80E-02	+ - 3.1E-01	U	pCi/L	88%	6.86E-01	1.00E+00	
		PU239/40	-9.33E-03	+ - 3.1E-01	U	pCi/L	88%	5.93E-01	1.00E+00	
<b>6270062 AMCMISO_EIE_PLT_AEA</b>										
	<b>B34MB5</b>									
	M89DK1AC	AMERICIUM 241	1.34E-01	+ - 3.1E-01	U	pCi/L	91%	6.63E-01	1.00E+00	
	<b>B36M17 DUP</b>									
	M87X81AM	AMERICIUM 241	-1.05E-02	+ - 3.5E-01	U	pCi/L	83%	6.70E-01	1.00E+00	232.7
	<b>B36M58</b>									
	M89PH1AD	AMERICIUM 241	1.32E-01	+ - 3.0E-01	U	pCi/L	95%	6.24E-01	1.00E+00	
<b>6270068 UIISO_PLATE_AEA</b>										
	<b>B34MB5</b>									
	M89DK1AK	U-234	6.41E-01	+ - 6.6E-01		pCi/L	79%	5.93E-01	1.00E+00	
		U-235	-3.23E-03	+ - 3.2E-01	U	pCi/L	79%	5.61E-01	1.00E+00	
		U-238	1.55E-01	+ - 3.3E-01	U	pCi/L	79%	5.93E-01	1.00E+00	
	<b>B36M17 DUP</b>									
	M87X81AQ	U-234	9.54E-01	+ - 8.1E-01		pCi/L	82%	5.86E-01	1.00E+00	0.7

TestAmerica Inc RPD - Relative Percent Difference.

rptTALRchSaSum U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan mary2 V5.8 A2002 software.

## Sample Results Summary

Date: 15-Nov-16

## TestAmerica Inc TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 69692

SDG No: W07612

Batch	Client Id Work Order	Parameter	Result +/- CSU ( 2 s)		Qual	Units	Tracer Yield	MDL	CRDL	RPD
<b>6270068 UISO_PLATE_AEA</b>										
	<b>B36M17 DUP</b>									
M87X81AQ	U-235		-3.20E-03	+- 3.2E-01	U	pCi/L	82%	5.55E-01	1.00E+00	-200.0
	U-238		1.27E+00	+- 9.5E-01		pCi/L	82%	5.86E-01	1.00E+00	130.3
<b>B36M58</b>										
M89PH1AK	U-234		-3.09E-03	+- 3.1E-01	U	pCi/L	85%	5.36E-01	1.00E+00	
	U-235		-3.09E-03	+- 3.1E-01	U	pCi/L	85%	5.36E-01	1.00E+00	
	U-238		1.45E-01	+- 3.1E-01	U	pCi/L	85%	5.89E-01	1.00E+00	
<b>6260018 GAMMA_GS</b>										
	<b>B34MB5</b>									
M89DK1AE	CO-60		1.35E-01	+- 1.7E+00	U	pCi/L		3.13E+00	2.50E+01	
	CS-134		1.16E+00	+- 1.6E+00	U	pCi/L		3.08E+00	8.00E+01	
	CS-137		-8.50E-01	+- 1.4E+00	U	pCi/L		2.36E+00	1.50E+01	
	EU-152		-9.80E-01	+- 3.5E+00	U	pCi/L		6.12E+00	5.00E+01	
	EU-154		-1.11E+00	+- 4.9E+00	U	pCi/L		8.78E+00	5.00E+01	
	EU-155		-7.69E-01	+- 3.3E+00	U	pCi/L		5.51E+00	5.00E+01	
	K-40		2.17E+00	+- 3.6E+01	U	pCi/L		2.94E+01		
	SB-125		2.19E+00	+- 3.5E+00	U	pCi/L		6.58E+00	5.00E+01	
<b>B36FW5</b>										
M88401AD	CO-60		-4.93E-01	+- 1.6E+00	U	pCi/L		2.96E+00	2.50E+01	
	CS-134		2.07E+00	+- 1.6E+00	U	pCi/L		3.30E+00	8.00E+01	
	CS-137		-6.62E-01	+- 1.5E+00	U	pCi/L		2.58E+00	1.50E+01	
	EU-152		-6.59E-01	+- 3.4E+00	U	pCi/L		5.83E+00	5.00E+01	
	EU-154		-6.97E+00	+- 5.2E+00	U	pCi/L		7.73E+00	5.00E+01	
	EU-155		7.74E-01	+- 2.7E+00	U	pCi/L		4.32E+00	5.00E+01	
	K-40		-1.13E+02	+- 4.3E+01	U	pCi/L		8.21E+01		
	SB-125		2.39E+00	+- 3.4E+00	U	pCi/L		6.23E+00	5.00E+01	
<b>B36FX0</b>										
M89DH1AD	CO-60		7.78E-01	+- 2.2E+00	U	pCi/L		4.20E+00	2.50E+01	
	CS-134		6.26E-01	+- 2.1E+00	U	pCi/L		3.80E+00	8.00E+01	
	CS-137		-5.08E-01	+- 2.0E+00	U	pCi/L		3.39E+00	1.50E+01	
	EU-152		1.83E-01	+- 4.7E+00	U	pCi/L		8.04E+00	5.00E+01	
	EU-154		-2.63E+00	+- 5.6E+00	U	pCi/L		9.60E+00	5.00E+01	
	EU-155		4.64E+00	+- 4.8E+00	U	pCi/L		8.97E+00	5.00E+01	
	K-40		-5.92E+01	+- 5.5E+01	U	pCi/L		1.10E+02		
	SB-125		1.17E+00	+- 4.6E+00	U	pCi/L		8.25E+00	5.00E+01	
<b>B36FX5</b>										
M88411AD	CO-58		-1.96E+00	+- 2.3E+00	U	pCi/L		3.71E+00		
	CS-134		1.68E+00	+- 2.1E+00	U	pCi/L		4.07E+00	8.00E+01	

TestAmerica Inc RPD - Relative Percent Difference.

rptTALRchSaSum  
mary2 V5.8 A2002 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

## Sample Results Summary

Date: 15-Nov-16

## TestAmerica Inc TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 69692

SDG No: W07625

Batch	Client Id Work Order	Parameter	Result +/- CSU ( 2 s)		Qual	Units	Tracer Yield	MDL	CRDL	RPD		
<b>6260018 GAMMA_GS</b>												
<b>B36FX5</b>												
M88411AD CS-137												
EU-152												
EU-154												
EU-155												
K-40												
SB-125												
<b>B36KF8 DUP</b>												
M88G61AF CO-60												
CS-134												
CS-137												
EU-152												
EU-154												
EU-155												
K-40												
SB-125												
<b>B36M58</b>												
M89PH1AF CO-60												
CS-134												
CS-137												
EU-152												
EU-154												
EU-155												
K-40												
SB-125												
<b>6272025 I129LL_SEP_LEPS_GS</b>												
<b>B36BK5</b>												
M89L01AE I129												
<b>B36BL2</b>												
M89L11AE I129												
<b>B36BL9</b>												
M89L21AE I129												
<b>B36BM6</b>												
M89L31AE I129												
<b>B36FX0</b>												
M89DH1AE I129												
<b>B36H06</b>												
M89L91AE I129												

TestAmerica Inc RPD - Relative Percent Difference.

rptTALRchSaSum U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

## Sample Results Summary

Date: 15-Nov-16

## TestAmerica Inc TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 69692

SDG No: W07634

Batch	Client Id Work Order	Parameter	Result +/- CSU ( 2 s)		Qual	Units	Tracer Yield	MDL	CRDL	RPD
<b>6272025 I129LL_SEP_LEPS_GS</b>										
	<b>B36WL4 DUP</b>									
M893N1AG	I129		-7.02E-03	+- 2.2E-01	U	pCi/L	99%	4.15E-01	1.00E+00	-190.1
<b>6291050 I129LL_SEP_LEPS_GS</b>										
	<b>B36BL1</b>									
M89LX2AE	I129		2.79E+00	+- 6.2E-01		pCi/L	96%	5.01E-01	1.00E+00	
<b>6270073 9310_ALPHABETA_GPC</b>										
	<b>B36BB2</b>									
M88491AA	Alpha		5.48E-01	+- 1.7E+00	U	pCi/L	100%	2.98E+00	3.00E+00	
	<b>B36BL9</b>									
M89L21AA	Alpha		2.04E-01	+- 4.2E-01	U	pCi/L	100%	7.29E-01	3.00E+00	
<b>6270074 9310_ALPHABETA_GPC</b>										
	<b>B36BB2</b>									
M88491AC	Beta		4.96E+03	+- 6.3E+02		pCi/L	100%	1.81E+00	4.00E+00	
	<b>B36BK5</b>									
M89L01AC	Beta		3.88E+01	+- 5.6E+00		pCi/L	100%	1.92E+00	4.00E+00	
	<b>B36BL1</b>									
M89LX1AC	Beta		1.69E+01	+- 2.8E+00		pCi/L	100%	1.86E+00	4.00E+00	
	<b>B36BL2</b>									
M89L11AC	Beta		1.72E+01	+- 2.8E+00		pCi/L	100%	1.76E+00	4.00E+00	
	<b>B36BL9</b>									
M89L21AC	Beta		1.04E+00	+- 9.9E-01	U	pCi/L	100%	1.59E+00	4.00E+00	
	<b>B36BM6</b>									
M89L31AC	Beta		2.00E+01	+- 3.3E+00		pCi/L	100%	2.32E+00	4.00E+00	
	<b>B36FW5</b>									
M88401AA	Beta		1.61E+01	+- 3.1E+00		pCi/L	100%	2.72E+00	4.00E+00	
	<b>B36FX0</b>									
M89DH1AA	Beta		9.48E+02	+- 1.2E+02		pCi/L	100%	2.90E+00	4.00E+00	
	<b>B36FX5</b>									
M88411AA	Beta		1.60E+01	+- 3.2E+00		pCi/L	100%	3.00E+00	4.00E+00	
	<b>B36H06</b>									
M89L91AD	Beta		1.78E+01	+- 4.0E+00		pCi/L	100%	4.51E+00	4.00E+00	
	<b>B36LF0 DUP</b>									
M88KT1AJ	Beta		2.57E+02	+- 3.4E+01		pCi/L	100%	2.30E+00	4.00E+00	15.3
<b>6271042 RATOT_AEAGEA</b>										
	<b>B36BK5</b>									
M89L01AF	TOTAL ALPHA RA		-7.33E-02	+- 1.6E-01	U	pCi/L	71%	4.32E-01	3.00E+00	
	<b>B36BL1</b>									
M89LX1AF	TOTAL ALPHA RA		6.88E-02	+- 2.3E-01	U	pCi/L	70%	4.63E-01	3.00E+00	
	<b>B36BL2</b>									

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## Sample Results Summary

Date: 15-Nov-16

## TestAmerica Inc TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 69692

SDG No: W07625

Batch	Client Id Work Order	Parameter	Result +/- CSU ( 2 s)		Qual	Units	Tracer Yield	MDL	CRDL	RPD
<b>6271042 RATOT_AEAGEA</b>										
	<b>B36BL2</b>	M89L11AF TOTAL ALPHA RA	9.52E-02	+- 2.3E-01	U	pCi/L	78%	4.32E-01	3.00E+00	
	<b>B36BL9</b>	M89L21AF TOTAL ALPHA RA	-1.16E-01	+- 2.1E-01	U	pCi/L	73%	5.30E-01	3.00E+00	
	<b>B36BM0</b>	M89LW1AC TOTAL ALPHA RA	2.61E-02	+- 2.0E-01	U	pCi/L	92%	4.12E-01	3.00E+00	
	<b>B36BM0 DUP</b>	M89LW1AD TOTAL ALPHA RA	-5.16E-03	+- 2.0E-01	U	pCi/L	97%	4.26E-01	3.00E+00	298.7
	<b>B36BM6</b>	M89L31AF TOTAL ALPHA RA	4.23E-02	+- 2.3E-01	U	pCi/L	85%	4.70E-01	3.00E+00	
<b>6292018 9310_ALPHABETA_GPC</b>										
	<b>B36H9 DUP</b>	M879C2AD Alpha	8.48E-02	+- 2.2E+00	U	pCi/L	100%	4.08E+00	3.00E+00	179.9
	<b>B36BK5</b>	M89L02AA Alpha	1.94E+00	+- 1.1E+00		pCi/L	100%	1.36E+00	3.00E+00	
	<b>B36BL1</b>	M89LX2AA Alpha	1.65E+00	+- 1.1E+00		pCi/L	100%	1.53E+00	3.00E+00	
	<b>B36BL2</b>	M89L12AA Alpha	1.30E+00	+- 1.2E+00	U	pCi/L	100%	1.92E+00	3.00E+00	
	<b>B36BM6</b>	M89L32AA Alpha	8.40E-01	+- 1.3E+00	U	pCi/L	100%	2.20E+00	3.00E+00	
	<b>B36H06</b>	M89L92AC Alpha	-5.10E-02	+- 4.0E-01	U	pCi/L	100%	7.56E-01	3.00E+00	
<b>6270064 PU241_IE_LSC</b>										
	<b>B34MB5</b>	M89DK1AA PU-241	-7.64E-01	+- 1.3E+01	U	pCi/L	70%	2.34E+01	2.50E+01	
	<b>B36M17 DUP</b>	M87X81AP PU-241	3.76E+00	+- 1.1E+01	U	pCi/L	82%	2.03E+01	2.50E+01	72.2
	<b>B36M58</b>	M89PH1AA PU-241	-8.50E-01	+- 1.0E+01	U	pCi/L	88%	1.85E+01	2.50E+01	
<b>6270072 SE79_SEP_IE_LSC</b>										
	<b>B34MB5</b>	M89DK1AG SE-79	-6.08E-01	+- 7.1E+00	U	pCi/L	90%	1.52E+01	3.00E+01	
	<b>B36FW5</b>	M88401AE SE-79	8.62E+00	+- 8.4E+00	U	pCi/L	83%	1.69E+01	3.00E+01	
	<b>B36FX0</b>	M89DH1AF SE-79	2.31E+01	+- 1.0E+01		pCi/L	88%	1.84E+01	3.00E+01	
	<b>B36FX5</b>	M88411AE SE-79	-3.07E+00	+- 7.2E+00	U	pCi/L	90%	1.57E+01	3.00E+01	

TestAmerica Inc RPD - Relative Percent Difference.

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## Sample Results Summary

Date: 15-Nov-16

## TestAmerica Inc TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 69692

SDG No: W07612

Batch	Client Id Work Order	Parameter	Result +/- CSU ( 2 s)		Qual	Units	Tracer Yield	MDL	CRDL	RPD
<b>6270072 SE79_SEP_IE_LSC</b>										
	<b>B36HX3 DUP</b>									
M88N51AL	SE-79		4.49E+00	+/- 7.9E+00	U	pCi/L	84%	1.62E+01	3.00E+01	807.4
M89PH1AH	SE-79		2.36E+01	+/- 9.4E+00		pCi/L	82%	1.72E+01	3.00E+01	
<b>6271048 TC99_ETVDSK_LSC</b>										
	<b>B34MB5</b>									
M89DK1AJ	Tc-99		1.81E+02	+/- 1.5E+01		pCi/L	100%	1.70E+01	5.00E+01	
M89L01AG	Tc-99		1.41E+02	+/- 1.3E+01		pCi/L	100%	1.64E+01	5.00E+01	
<b>B36BL1</b>										
M89LX1AG	Tc-99		5.33E+01	+/- 9.6E+00		pCi/L	100%	1.65E+01	5.00E+01	
<b>B36BL2</b>										
M89L11AG	Tc-99		5.78E+01	+/- 1.0E+01		pCi/L	100%	1.74E+01	5.00E+01	
<b>B36BL9</b>										
M89L21AG	Tc-99		-1.55E-01	+/- 7.0E+00	U	pCi/L	100%	1.66E+01	5.00E+01	
<b>B36BM6</b>										
M89L31AG	Tc-99		6.00E+01	+/- 1.0E+01		pCi/L	100%	1.76E+01	5.00E+01	
<b>B36BM6 DUP</b>										
M89L31AH	Tc-99		6.16E+01	+/- 1.0E+01		pCi/L	100%	1.65E+01	5.00E+01	2.5
<b>B36FW5</b>										
M88401AF	Tc-99		2.11E+01	+/- 8.5E+00		pCi/L	100%	1.75E+01	5.00E+01	
<b>B36FX0</b>										
M89DH1AG	Tc-99		1.13E+03	+/- 3.9E+01		pCi/L	100%	1.62E+01	5.00E+01	
<b>B36FX5</b>										
M88411AF	Tc-99		2.43E+01	+/- 8.5E+00		pCi/L	100%	1.70E+01	5.00E+01	
<b>B36H06</b>										
M89L91AG	Tc-99		4.93E+00	+/- 7.6E+00	U	pCi/L	100%	1.75E+01	5.00E+01	
<b>B36M58</b>										
M89PH1AJ	Tc-99		2.30E+00	+/- 7.3E+00	U	pCi/L	100%	1.71E+01	5.00E+01	
<b>6272027 906.0_H3_LSC</b>										
	<b>B34KC6</b>									
M89DJ1AA	H-3		1.21E+04	+/- 6.6E+02		pCi/L	100%	3.39E+02	7.00E+02	
<b>B36C94</b>										
M89PN1AA	H-3		9.22E+03	+/- 5.5E+02		pCi/L	100%	3.39E+02	7.00E+02	
<b>B36CJ5</b>										
M89PL1AA	H-3		9.37E+01	+/- 1.6E+02	U	pCi/L	100%	3.56E+02	7.00E+02	
<b>B36CJ6</b>										
M89PM1AA	H-3		1.06E+04	+/- 6.1E+02		pCi/L	100%	3.52E+02	7.00E+02	
<b>B36H06</b>										

TestAmerica Inc RPD - Relative Percent Difference.

rptTALRchSaSum U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan mary2 V5.8 A2002 software.

## Sample Results Summary

Date: 15-Nov-16

## TestAmerica Inc TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 69692

SDG No: W07625

Batch	Client Id Work Order	Parameter	Result +/- CSU ( 2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
<b>6272027 906.0_H3_LSC</b>									
	<b>B36H06</b>	M89L91AA H-3	4.24E+04 +/- 1.8E+03		pCi/L	100%	3.41E+02	7.00E+02	
	<b>B36M18</b>	M89MN1AA H-3	4.62E+03 +/- 3.7E+02		pCi/L	100%	3.43E+02	7.00E+02	
	<b>B36M56</b>	M89PF1AA H-3	3.60E+03 +/- 3.2E+02		pCi/L	100%	3.39E+02	7.00E+02	
	<b>B36M58</b>	M89PH1AC H-3	1.92E+03 +/- 2.5E+02		pCi/L	100%	3.52E+02	7.00E+02	
	<b>B36M59</b>	M89PJ1AA H-3	3.70E+02 +/- 1.7E+02		pCi/L	100%	3.48E+02	7.00E+02	
	<b>B36MB8</b>	M89PK1AA H-3	5.45E+03 +/- 4.0E+02		pCi/L	100%	3.40E+02	7.00E+02	
	<b>B36MF9</b>	M89PG1AA H-3	7.10E+03 +/- 4.7E+02		pCi/L	100%	3.40E+02	7.00E+02	
	<b>B36XK9 DUP</b>	M893R1AG H-3	-2.75E+01 +/- 1.5E+02	U	pCi/L	100%	3.40E+02	7.00E+02	290.4
<b>6273030 C14_LSC</b>									
	<b>B34MB5</b>	M89DK1AD C-14	-2.90E-01 +/- 4.2E+00	U	pCi/L	100%	9.52E+00	5.00E+01	
	<b>B36BK5</b>	M89L01AD C-14	1.93E+01 +/- 5.3E+00		pCi/L	100%	9.84E+00	5.00E+01	
	<b>B36BL1</b>	M89LX1AD C-14	2.71E+01 +/- 5.8E+00		pCi/L	100%	9.98E+00	5.00E+01	
	<b>B36BL2</b>	M89L11AD C-14	2.28E+01 +/- 5.6E+00		pCi/L	100%	9.77E+00	5.00E+01	
	<b>B36BL9</b>	M89L21AD C-14	1.25E+00 +/- 4.3E+00	U	pCi/L	100%	9.51E+00	5.00E+01	
	<b>B36BM0</b>	M89LW1AA C-14	6.56E+00 +/- 4.6E+00	U	pCi/L	100%	9.49E+00	5.00E+01	
	<b>B36BM6</b>	M89L31AD C-14	1.50E+00 +/- 4.3E+00	U	pCi/L	100%	9.49E+00	5.00E+01	
	<b>B36FW5</b>	M88401AC C-14	1.83E+00 +/- 4.3E+00	U	pCi/L	100%	9.50E+00	5.00E+01	
	<b>B36FX0</b>	M89DH1AC C-14	4.48E+00 +/- 4.4E+00	U	pCi/L	100%	9.50E+00	5.00E+01	
	<b>B36FX5</b>	M88411AC C-14	5.13E+00 +/- 4.6E+00	U	pCi/L	100%	9.89E+00	5.00E+01	
	<b>B36M58</b>	M89PH1AE C-14	3.62E+01 +/- 6.2E+00		pCi/L	100%	9.50E+00	5.00E+01	

TestAmerica Inc RPD - Relative Percent Difference.

rptTALRchSaSum U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan mary2 V5.8 A2002 software.

**Sample Results Summary****Date:** 15-Nov-16**TestAmerica Inc TARL**

Ordered by Method, Batch No., Client Sample ID.

**Report No.:** 69692**SDG No:** W07636

Batch	Client Id Work Order	Parameter	Result +- CSU ( 2 s)	Qual	Units	Tracer Yield	MDL	CRDL	RPD
6273030	C14_LSC								
B37147	DUP	M9AJN1AE C-14	4.35E+02 +- 2.8E+01		pCi/L	100%	9.54E+00	5.00E+01	5.4

**No. of Results:** 152

## QC Results Summary

Date: 15-Nov-16

## TestAmerica Inc TARL

Ordered by Method, Batch No, QC Type,.

Report No. : 69692

SDG No.: W07612

Batch	Work Order	Parameter	Result +- CSU ( 2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
<b>SRISO_SEP_PRECIP_GPC</b>									
6273031	BLANK QC, M9AKT1AA	STRONTIUM	-2.78E-01 +- 7.3E-01	U	pCi/L	75%			1.40E+00
6273031	LCS, M9AKT1AC	STRONTIUM	1.50E+01 +- 3.8E+00		pCi/L	87%	116%	0.2	1.24E+00
<b>PUISO_PLATE_AEA</b>									
6270063	BLANK QC, M89PX1AA	PU-238	-4.20E-02 +- 3.5E-01	U	pCi/L	85%			8.10E-01
		PU239/40	-3.50E-03 +- 3.5E-01	U	pCi/L	85%			6.07E-01
6270063	LCS, M89PX1AC	PU239/40	4.80E+00 +- 2.1E+00		pCi/L	78%	107%	0.1	7.02E-01
<b>AMCMISO_EIE_PLT_AEA</b>									
6270062	BLANK QC, M89PW1AA	AMERICIUM 241	-7.03E-02 +- 3.2E-01	U	pCi/L	88%			8.31E-01
6270062	LCS, M89PW1AC	AMERICIUM 241	2.46E+01 +- 6.7E+00		pCi/L	86%	109%	0.1	7.59E-01
<b>UIISO_PLATE_AEA</b>									
6270068	BLANK QC, M89P51AA	U-234	-5.34E-03 +- 2.7E-01	U	pCi/L	90%			4.89E-01
		U-235	-2.67E-03 +- 2.7E-01	U	pCi/L	90%			4.63E-01
		U-238	-2.67E-03 +- 2.7E-01	U	pCi/L	90%			4.63E-01
6270068	LCS, M89P51AC	U-234	1.35E+01 +- 4.0E+00		pCi/L	89%	87%	-0.1	5.36E-01
		U-238	1.58E+01 +- 4.5E+00		pCi/L	89%	98%	0.0	5.08E-01
<b>GAMMA_GS</b>									
6260018	BLANK QC, M88JX1AA	CO-60	-3.95E-01 +- 1.4E+00	U	pCi/L				2.63E+00
		CS-134	-7.78E-01 +- 1.4E+00	U	pCi/L				2.44E+00
		CS-137	-3.06E-01 +- 1.1E+00	U	pCi/L				1.99E+00
		EU-152	4.23E-01 +- 2.7E+00	U	pCi/L				4.83E+00
		EU-154	1.63E+00 +- 3.4E+00	U	pCi/L				7.22E+00
		EU-155	1.25E+00 +- 1.5E+00	U	pCi/L				2.81E+00
		K-40	-1.04E+01 +- 2.1E+01	U	pCi/L				3.92E+01
		SB-125	9.69E-01 +- 2.7E+00	U	pCi/L				5.03E+00
6260018	LCS, M88JX1AC	CO-60	3.73E+01 +- 7.2E+00		pCi/L		98%	0.0	3.06E+00
		CS-137	5.54E+01 +- 8.7E+00		pCi/L		112%	0.1	2.68E+00
		EU-152	7.77E+01 +- 1.4E+01		pCi/L		101%	0.0	6.77E+00
<b>I129LL_SEP_LEPS_GS</b>									
6272025	BLANK QC, M896V1AA	I129	-3.68E-01 +- 4.2E-01	U	pCi/L	96%			6.68E-01
6272025	LCS,								

TestAmerica Inc Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchQcSum  
mary V5.8 A2002 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

**QC Results Summary****Date:** 15-Nov-16**TestAmerica Inc TARL**

Ordered by Method, Batch No, QC Type,.

**Report No.:** 69692**SDG No.:** W07612

<b>Batch</b>	<b>Work Order</b>	<b>Parameter</b>	<b>Result +- CSU ( 2 s)</b>	<b>Qual</b>	<b>Units</b>	<b>Tracer Yield</b>	<b>LCS Recovery</b>	<b>Bias</b>	<b>MDL</b>
	M896V1AC	I129	1.65E+01 +- 2.2E+00		pCi/L	96%	86%	-0.1	5.90E-01
<b>I129LL_SEP_LEPS_GS</b>									
6291050 BLANK QC,									
M9D771AA	I129		-4.39E-01 +- 3.8E-01	U	pCi/L	98%			5.67E-01
6291050 LCS,									
M9D771AC	I129		1.80E+01 +- 2.4E+00		pCi/L	96%	94%	-0.1	6.03E-01
<b>9310_ALPHABETA_GPC</b>									
6270073 BLANK QC,									
M89QA1AA	Alpha		-2.36E-02 +- 4.2E-01	U	pCi/L	100%			7.88E-01
6270073 LCS,									
M89QA1AC	Alpha		2.26E+01 +- 5.9E+00		pCi/L	100%	99%	0.0	9.13E-01
<b>9310_ALPHABETA_GPC</b>									
6270074 BLANK QC,									
M89QC1AA	Beta		6.03E-01 +- 1.1E+00	U	pCi/L	100%			1.78E+00
6270074 LCS,									
M89QC1AC	Beta		2.02E+01 +- 3.1E+00		pCi/L	100%	87%	-0.1	1.57E+00
<b>RATOT_AEAGEA</b>									
6271042 BLANK QC,									
M89WV1AA	TOTAL ALPHA RA		-1.32E-01 +- 1.3E-01	U	pCi/L	85%			4.27E-01
6271042 LCS,									
M89WV1AC	TOTAL ALPHA RA		5.21E+00 +- 1.4E+00		pCi/L	74%	83%	-0.2	5.11E-01
<b>9310_ALPHABETA_GPC</b>									
6292018 BLANK QC,									
M9D971AA	Alpha		2.98E-01 +- 5.3E-01	U	pCi/L	100%			9.02E-01
6292018 LCS,									
M9D971AC	Alpha		2.18E+01 +- 5.8E+00		pCi/L	100%	97%	0.0	7.94E-01
<b>PU241_IE_LSC</b>									
6270064 BLANK QC,									
M89P01AA	PU-241		1.09E+00 +- 1.1E+01	U	pCi/L	85%			1.97E+01
6270064 LCS,									
M89P01AC	PU-241		1.17E+03 +- 8.7E+01		pCi/L	78%	107%	0.1	2.09E+01
<b>SE79_SEP_IE_LSC</b>									
6270072 BLANK QC,									
M89P91AA	SE-79		7.35E+00 +- 7.9E+00	U	pCi/L	88%			1.59E+01
<b>TC99_ETVDSK_LSC</b>									
6271048 MATRIX SPIKE, B36H06									
M89L91AH	Tc-99		5.10E+02 +- 2.6E+01		pCi/L	100%	95%	-0.1	1.74E+01
6271048 BLANK QC,									
M89XD1AA	Tc-99		7.97E+00 +- 7.8E+00	U	pCi/L	100%			1.76E+01
6271048 LCS,									
M89XD1AC	Tc-99		1.02E+02 +- 1.2E+01		pCi/L	100%	97%	0.0	1.69E+01
<b>906.0_H3_LSC</b>									
6272027 MATRIX SPIKE, B36XK4									

TestAmerica Inc Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchQcSum U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.  
mary V5.8 A2002

**QC Results Summary**  
**TestAmerica Inc TARL**  
 Ordered by Method, Batch No, QC Type,.

Date: 15-Nov-16

Report No. : 69692

SDG No.: W07634

Batch	Work Order	Parameter	Result +- CSU ( 2 s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
	M893T1AG	H-3	2.32E+03 +- 1.8E+03		pCi/L	100%	154%	0.5	4.08E+02
6272027	BLANK QC,								
	M896X1AA	H-3	5.26E+01 +- 1.6E+02	U	pCi/L	100%			3.57E+02
6272027	LCS,								
	M896X1AC	H-3	2.75E+03 +- 2.9E+02		pCi/L	100%	101%	0.0	3.56E+02
<b>C14_LSC</b>									
6273030	MATRIX SPIKE, B37147								
	M9AJN1AF	C-14	-3.58E+02 +- 3.3E+01	U	pCi/L	100%			9.59E+00
6273030	BLANK QC,								
	M9AKR1AA	C-14	-3.41E+00 +- 4.1E+00	U	pCi/L	100%			9.50E+00
6273030	LCS,								
	M9AKR1AC	C-14	1.43E+02 +- 1.2E+01		pCi/L	100%	99%	0.0	9.51E+00

No. of Results: 47

11/15/2016

Date: 15-Nov-16

# FORM I

## SAMPLE RESULTS

**Lab Name:** TestAmerica Inc  
**Lot-Sample No.:** J61220418-1  
**Client Sample ID:** B34KC6

<b>SDG:</b>	W07625	<b>Collection Date:</b>	9/21/2016 11:27:00 AM
<b>Report No. :</b>	69692	<b>Received Date:</b>	9/21/2016 2:30:00 PM
<b>COC No. :</b>	116-018-013	<b>Matrix:</b>	WATER
<b>Ordered by Client Sample ID, Batch No.</b>			
Parameter	Result	Qual	Count (2 s)
			Error (2 s)
Work Order:	M89DJ1AA	Rpt Unit, Lc	MDL, Action Lev
Batch:	906.0_H3_LSC	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert
H-3	1.21E+04	6.6E+02	3.39E+02 pCi/L
		1.59E+02	7.00E+02 (36.5)

No. of Results: 1      Comments:

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch:	906.0_H3_LSC												
H-3	1.21E+04	4.4E+02	6.6E+02	3.39E+02	pCi/L	1.59E+02	7.00E+02	100% (35.6)	10/14/16 12:41 p (36.5)		0.00503	LSC8 L	

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61220419-1  
Client Sample ID: B34MB5

SDG: W07625  
Report No.: 69692  
COC No.: S16-004-320

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.	
											Total Sa Size	Aliquot Size
Batch: 6260018	GAMMA_GS				Work Order: M89DK1AE	Report DB ID: 9M89DK10						
CO-60	1.35E-01	U	1.7E+00	1.7E+00	3.13E+00	pCi/L	1.56E+00	2.50E+01	0.04	10/13/16 08:19 a	1.9843	GER11\$1
CS-134	1.16E+00	U	1.6E+00	1.6E+00	3.08E+00	pCi/L	1.52E+00	8.00E+01	0.16	10/13/16 08:19 a	1.9843	GER11\$1
CS-137	-8.50E-01	U	1.4E+00	1.4E+00	2.36E+00	pCi/L	1.19E+00	1.50E+01	(1.5)	10/13/16 08:19 a	1.9843	GER11\$1
EU-152	-9.80E-01	U	3.5E+00	3.5E+00	6.12E+00	pCi/L	3.06E+00	5.00E+01	-0.36	(-1.2)	1.9843	GER11\$1
EU-154	-1.11E+00	U	4.9E+00	4.9E+00	8.78E+00	pCi/L	4.40E+00	5.00E+01	-0.16	10/13/16 08:19 a	1.9843	GER11\$1
EU-155	-7.69E-01	U	3.3E+00	3.3E+00	5.51E+00	pCi/L	2.74E+00	5.00E+01	-0.56	10/13/16 08:19 a	1.9843	GER11\$1
K-40	2.17E+00	U	3.6E+01	3.6E+01	2.94E+01	pCi/L	1.48E+01	1.48E+01	-0.45	10/13/16 08:19 a	1.9843	GER11\$1
SB-125	2.19E+00	U	3.5E+00	3.5E+00	6.58E+00	pCi/L	3.25E+00	5.00E+01	-0.14	10/13/16 08:19 a	1.9843	GER11\$1
									-0.47		1.9843	GER11\$1
									0.07		1.9843	GER11\$1
									0.12		1.9843	GER11\$1
									0.33		1.9843	GER11\$1
									(1.2)		1.9843	GER11\$1
Batch: 6270062	AMCMISO_EIE_PLT_AEA				Work Order: M89DK1AC	Report DB ID: 9M89DK10						
AMERICIUM 241	1.34E-01	U	3.1E-01	3.1E-01	6.63E-01	pCi/L	1.46E-01	1.00E+00	91%	0.2	10/19/16 08:32 p	0.2039 ALP409
Batch: 6270063	PUSO_PLATE_AEA				Work Order: M89DK1AF	Report DB ID: 9M89DK10						

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61220419-1  
Client Sample ID: B34MB5

SDG: W07625  
Report No.: 69692  
COC No.: S16-004-320

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
											Total Sa Size	Aliquot Size	Primary Detector
PU-238	-2.81E-02	U	4.0E-01	4.0E-01	8.52E-01	8.52E-01	pCi/L	70%	-0.03	10/19/16 08:36 p	0.2073	ALP433	L
PU239/40	-1.20E-02	U	4.0E-01	4.0E-01	7.65E-01	7.65E-01	pCi/L	70%	-0.02	10/19/16 08:36 p	0.2073	ALP433	L
Batch: 6270064	PU241_1E_LSC				Work Order: M89DK1AA			Report DB ID: 9M89DK10					
PU-241	-7.64E-01	U	9.6E+00	1.3E+01	2.34E+01	2.34E+01	pCi/L	70%	-0.03	10/29/16 05:56 a	0.2073	LSC10	L
Batch: 6270068	UISO_PLATE_AEA				Work Order: M89DK1AK			Report DB ID: 9M89DK10					
U-234	6.41E-01		6.5E-01	6.6E-01	5.93E-01	5.93E-01	pCi/L	79%	(1.1)	10/26/16 09:07 p	0.2074	ALP436	L
U-235	-3.23E-03	U	3.2E-01	3.2E-01	5.61E-01	5.61E-01	pCi/L	79%	-0.01	10/26/16 09:07 p	0.2074	ALP436	L
U-238	1.55E-01	U	3.2E-01	3.3E-01	5.93E-01	5.93E-01	pCi/L	79%	-0.02	10/26/16 09:07 p	0.2074	ALP436	L
Batch: 6270072	SE79_SEP_1E_LSC				Work Order: M89DK1AG			Report DB ID: 9M89DK10					
SE-79	-6.08E-01	U	6.1E+00	7.1E+00	1.52E+01	1.52E+01	pCi/L	90%	-0.04	10/29/16 06:57 p	0.2089	LSC3	L
Batch: 6271048	TC99_ETVDSK_LSC				Work Order: M89DK1AJ			Report DB ID: 9M89DK10					
Tc-99	1.81E+02		1.4E+01	1.5E+01	1.70E+01	1.70E+01	pCi/L	100%	(10.6)	11/11/16 02:43 a	0.1301	LSC8	L
Batch: 6273030	C14_LSC				Work Order: M89DK1AD			Report DB ID: 9M89DK10					

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REV. 1

TestAmerica Inc MDC/MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdi, Total Uncert, RDL or not identified by gamma scan software.  
V5.8 A2002

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61220419-1  
 Client Sample ID: B34MB5

SDG:	W07625	Collection Date:	9/21/2016 11:27:00 AM									
Report No. :	69692	Received Date:	9/21/2016 2:30:00 PM									
COC No. :	S16-004-320	Matrix:	WATER									
Ordered by Client Sample ID, Batch No.												
Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
C-14	-2.90E-01	U	3.8E+00	4.2E+00	9.52E+00	pCi/L	100%	-0.03	10/20/16 10:14 a	0.25	L	LSC3
						4.44E+00	5.00E+01	-0.14				
Batch: 6273031	SRISO_SEP_PRECIP_GPC			Work Order: M89DK1AH	Report DB ID: 9M89DK10							
STRONTIUM	1.71E-02	U	7.3E-01	7.3E-01	1.33E+00	pCi/L	87%	0.01	10/6/16 09:05 p	0.5011	L	GPC32C
						5.98E-01	2.00E+00	0.05				

No. of Results: 19      Comments:

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61210409-1  
 Client Sample ID: B36BB2

SDG: W07625  
 Report No.: 69692  
 COC No.: I16-029-164

Ordered by Client Sample ID, Batch No.						
Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc
Batch: 6270073	9310_ALPHABETA_GPC			Work Order: M88491AA	Report DB ID: 9M884910	
Alpha	<b>5.48E-01</b>	U	1.7E+00	1.7E+00	2.98E+00 pCi/L	100% 0.18
					1.33E+00 3.00E+00	0.65
Batch: 6270074	9310_ALPHABETA_GPC			Work Order: M88491AC	Report DB ID: 9M884910	
Beta	<b>4.96E+03</b>		2.4E+01	6.3E+02	1.81E+00 pCi/L	100% (2738.)
					8.62E-01 4.00E+00	(15.8)
Batch: 6273031	SRISO_SEP_PRECIP_GPC			Work Order: M88491AD	Report DB ID: 9M884910	
STRONTIUM	<b>2.61E+03</b>		2.1E+01	5.9E+02	1.18E+00 pCi/L	90% (2219.2)
					5.25E-01 2.00E+00	(8.8)

No. of Results: 3 Comments:

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260401-3  
Client Sample ID: B36BK5

SDG: W07625  
Report No.: 69692  
COC No.: X16-053-010

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.	
											Total Sa Size	Aliquot Size
Batch: 6270074	9310_ALPHABETA_GPC					Work Order: M89L01AC		Report DB ID: 9M89L010				
Beta	<b>3.88E+01</b>	2.4E+00	5.6E+00	2.4E+00	5.6E+00	1.92E+00	pCi/L	100% (20.2)	10/13/16 08:36 p		0.2003	GPC32A L
Batch: 6271042	RATOT_AEAGEA					Work Order: M89L01AF		Report DB ID: 9M89L010				
TOTAL ALPHA RA	<b>-7.33E-02</b> U	1.6E-01	1.6E-01	1.6E-01	1.6E-01	4.32E-01	pCi/L	71% 1.56E-01	-0.17 3.00E+00	10/17/16 11:38 p	0.5173	GPC24D L
Batch: 6271048	TC99_ETVDSK_LSC					Work Order: M89L01AG		Report DB ID: 9M89L010				
Tc-99	<b>1.41E+02</b>	1.2E+01	1.3E+01	1.3E+01	1.3E+01	1.64E+01	pCi/L	100% 7.59E+00	(8.6) 5.00E+01	11/11/16 03:27 a	0.1341	LSC8 L
Batch: 6272025	I129LL_SEP_LEPS_GS					Work Order: M89L01AE		Report DB ID: 9M89L010				
I129	<b>1.52E+00</b>	5.7E-01	5.7E-01	5.7E-01	5.7E-01	4.82E-01	pCi/L	95% 2.31E-01	(3.2) 1.00E+00	10/19/16 08:42 a	2.0179	LEP5\$1 L
Batch: 6273030	C14_LSC					Work Order: M89L01AD		Report DB ID: 9M89L010				
C-14	<b>1.93E+01</b>	4.9E+00	5.3E+00	5.3E+00	5.3E+00	9.84E+00	pCi/L	100% 4.59E+00	(2.) 5.00E+01	10/20/16 11:27 a	0.25	LSC3 L
Batch: 6292018	9310_ALPHABETA_GPC					Work Order: M89L02AA		Report DB ID: 9M89L020				
Alpha	<b>1.94E+00</b>	9.9E-01	4.9E-01	1.1E+00	1.1E+00	1.36E+00	pCi/L	100% 5.95E-01	(1.4) 3.00E+00	10/21/16 03:22 p	0.1798	GPC21A L

No. of Results: 6      Comments:

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260401-2  
Client Sample ID: B36BL1

SDG: W07625  
Report No.: 69692  
COC No.: X16-053-012

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector	Ordered by Client Sample ID, Batch No.	
														Work Order:	Report DB ID:
Batch: 6270074	9310_ALPHABETA_GPC		1.69E+01	1.8E+00	2.8E+00	1.86E+00	pCi/L	Report DB ID: 9M89LX10	100% (9.1)	10/13/16 08:36 p (12.1)	0.2001 L	0.2001 L	GPC31D L	Work Order:	M89LX1AC
	Beta													Work Order:	M89LX1AF
Batch: 6271042	RATOT_AEAGEA		6.88E-02	U	2.3E-01	4.63E-01	pCi/L	Report DB ID: 9M89LX10	70% 0.15	10/17/16 11:38 p 0.59	0.5107 L	0.5107 L	GPC24C L	Work Order:	M89LX1AD
	TOTAL ALPHA RA													Work Order:	M89LX1AG
Batch: 6271048	TC99_ETVDSK_LSC		5.33E+01	9.3E+00	9.6E+00	1.65E+01	pCi/L	Report DB ID: 9M89LX10	100% (3.2)	11/11/16 03:05 a (11.1)	0.1333 L	0.1333 L	LSC8 L	Work Order:	M89LX1AE
	Tc-99													Work Order:	M89LX2AE
Batch: 6273030	C14_LSC		2.71E+01	5.3E+00	5.8E+00	9.98E+00	pCi/L	Report DB ID: 9M89LX10	100% (2.7)	10/20/16 11:02 a (9.3)	0.25 L	0.25 L	LSC3 L	Work Order:	M89LX1AD
	C-14													Work Order:	M89LX2AA
Batch: 6291050	I129LL_SEP_LEPS_GS		2.79E+00	6.2E-01	6.2E-01	5.01E-01	pCi/L	Report DB ID: 9M89LX20	96% (5.6)	10/21/16 09:38 a (9.)	2.0169 L	2.0169 L	LEP5\$1 L	Work Order:	M89LX1AA
	I129													Work Order:	M89LX2AA
Batch: 6292018	9310_ALPHABETA_GPC		1.65E+00	1.0E+00	1.1E+00	1.53E+00	pCi/L	Report DB ID: 9M89LX20	100% (1.1)	10/21/16 10:55 a (3.)	0.1779 L	0.1779 L	GPC24D L	Work Order:	M89LX1AA
	Alpha													Work Order:	M89LX2AA
No. of Results: 6		Comments:													

11/15/2016

REV. 1

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260401-4  
Client Sample ID: B36BL2

SDG: W07625  
Report No.: 69692  
COC No.: X16-053-014

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.	
											Total Sa Size	Aliquot Size
Batch: 6270074	9310_ALPHABETA_GPC					Work Order: M89L11AC		Report DB ID: 9M89L1100				
Beta	<b>1.72E+01</b>		1.7E+00	2.8E+00		1.76E+00	pCi/L	100%	(9.8)	10/13/16 08:36 p	0.2	GPC32B
							8.36E-01	4.00E+00	(12.5)		L	
Batch: 6271042	RATOT_AEAGEA					Work Order: M89L11AF		Report DB ID: 9M89L1100				
TOTAL ALPHA RA	<b>9.52E-02</b>	U	2.3E-01	2.3E-01		4.32E-01	pCi/L	78%	0.22	10/17/16 11:38 p	0.5216	GPC22A
							1.59E-01	3.00E+00	0.83		L	
Batch: 6271048	TC99_ETVDSK_LSC					Work Order: M89L11AG		Report DB ID: 9M89L1100				
Tc-99	<b>5.78E+01</b>		1.0E+01	1.0E+01		1.74E+01	pCi/L	100%	(3.3)	11/11/16 03:49 a	0.1262	LSC8
							8.06E+00	5.00E+01	(11.1)		L	
Batch: 6272025	I129LL_SEP_LEPS_GS					Work Order: M89L11AE		Report DB ID: 9M89L1100				
I129	<b>4.53E+00</b>		9.5E-01	9.5E-01		5.86E-01	pCi/L	100%	(7.7)	10/19/16 11:31 a	2.0316	LEP4\$1
							2.95E-01	1.00E+00	(9.5)		L	
Batch: 6273030	C14_LSC					Work Order: M89L11AD		Report DB ID: 9M89L1100				
C-14	<b>2.28E+01</b>		5.1E+00	5.6E+00		9.77E+00	pCi/L	100%	(2.3)	10/20/16 11:51 a	0.25	LSC3
							4.56E+00	5.00E+01	(8.2)		L	
Batch: 6292018	9310_ALPHABETA_GPC					Work Order: M89L12AA		Report DB ID: 9M89L1200				
Alpha	<b>1.30E+00</b>	U	1.2E+00	1.2E+00		1.92E+00	pCi/L	100%	0.68	10/21/16 03:22 p	0.1759	GPC21B
							8.62E-01	3.00E+00	(2.1)		L	

No. of Results: 6      Comments:

TestAmerica Inc      MDC/MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdi , Total Uncert, RDL or not identified by gamma scan software.  
V5.8 A2002

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REV. 1

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260401-5  
Client Sample ID: B36BL9

SDG: W07625  
Report No.: 69692  
COC No.: X16-053-016

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
											Total Sa Size	Aliquot Size	Primary Detector
Batch: 6270073	9310_ALPHABETA_GPC				Work Order: M89L21AA		Report DB ID: 9M89L210						
Alpha	<b>2.04E-01</b>	U	4.2E-01	4.2E-01	7.29E-01	pCi/L	100%	0.28	10/14/16 08:09 p		0.2002	GPC21C	
					3.19E-01	3.00E+00	0.97			L			
Batch: 6270074	9310_ALPHABETA_GPC				Work Order: M89L21AC		Report DB ID: 9M89L210						
Beta	<b>1.04E+00</b>	U	9.8E-01	9.9E-01	1.59E+00	pCi/L	100%	0.65	10/13/16 08:36 p		0.2009	GPC32C	
					7.57E-01	4.00E+00	(2.1)			L			
Batch: 6271042	RATOT_AEAGEA				Work Order: M89L21AF		Report DB ID: 9M89L210						
TOTAL ALPHA RA	<b>-1.16E-01</b>	U	2.1E-01	2.1E-01	5.30E-01	pCi/L	73%	-0.22	10/17/16 11:38 p		0.5161	GPC22B	
					2.04E-01	3.00E+00	(-1.1)			L			
Batch: 6271048	TC99_ETVDSK_LSC				Work Order: M89L21AG		Report DB ID: 9M89L210						
Tc-99	<b>-1.55E-01</b>	U	6.6E+00	7.0E+00	1.66E+01	pCi/L	100%	-0.01	11/11/16 04:10 a		0.1322	LSC8	
					7.70E+00	5.00E+01	-0.04			L			
Batch: 6272025	I129LL_SEP_LEPS_GS				Work Order: M89L21AE		Report DB ID: 9M89L210						
I129	<b>3.04E-02</b>	U	2.3E-01	2.3E-01	4.44E-01	pCi/L	100%	0.07	10/19/16 11:32 a		2.0124	LEP5\$1	
					2.24E-01	1.00E+00	0.26			L			
Batch: 6273030	C14_LSC				Work Order: M89L21AD		Report DB ID: 9M89L210						
C-14	<b>1.25E+00</b>	U	3.9E+00	4.3E+00	9.51E+00	pCi/L	100%	0.13	10/20/16 12:15 p		0.25	LSC3	
					4.44E+00	5.00E+01	0.59			L			

No. of Results: 6      Comments:

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260401-1  
 Client Sample ID: B36BM0

SDG: W07625  
 Report No.: 69692  
 COC No.: X16-053-018

Ordered by Client Sample ID, Batch No.						
Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit
Batch: 6271042	RATOT_AEAGEA			Work Order: M89LW1AC	Report DB ID: 9M89LW10	
TOTAL ALPHA RA	<b>2.61E-02</b>	U	2.0E-01	2.0E-01	4.12E-01	pCi/L
					1.59E-01	3.00E+00
Batch: 6273030	C14_LSC			Work Order: M89LW1AA	Report DB ID: 9M89LW10	
C-14	<b>6.56E+00</b>	U	4.2E+00	4.6E+00	9.49E+00	pCi/L
					4.43E+00	5.00E+01
No. of Results: 2	Comments:					

11/15/2016

REV. 1

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

**Lab Name:** TestAmerica Inc  
**Lot-Sample No.:** J61260401-6  
**Client Sample ID:** B36BM6

**SDG:** W07625

**Report No. :** 69692

**Collection Date:** 9/22/2016 1:15:00 PM

**Received Date:** 9/22/2016 2:50:00 PM

**COC No. :** X16-053-019

**Matrix:** WATER

Ordered by Client Sample ID, Batch No.												
Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Total Sa Size	Aliquot Size	Primary Detector	
Batch: 6270074	9310_ALPHABETA_GPC			Work Order: M89L31AC		Report DB ID: 9M89L3100						
Beta	<b>2.00E+01</b>	U	2.1E+00	3.3E+00	2.32E+00	pCi/L	100%	(8.6)	10/13/16 08:36 p	0.1786	GPC32D	
					1.11E+00	4.00E+00	(12.)			L		
Batch: 6271042	RATOT_AEAGEA			Work Order: M89L31AF		Report DB ID: 9M89L3100						
TOTAL ALPHA RA	<b>4.23E-02</b>	U	2.3E-01	2.3E-01	4.70E-01	pCi/L	85%	0.09	10/17/16 11:38 p	0.5159	GPC22C	
					1.81E-01	3.00E+00	0.36			L		
Batch: 6271048	TC99_ETVDSK_LSC			Work Order: M89L31AG		Report DB ID: 9M89L3100						
Tc-99	<b>6.00E+01</b>	U	1.0E+01	1.0E+01	1.76E+01	pCi/L	100%	(3.4)	11/11/16 04:32 a	0.1266	LSC8	
					8.15E+00	5.00E+01	(11.6)			L		
Batch: 6272025	I129LL_SEP_LEPS_GS			Work Order: M89L31AE		Report DB ID: 9M89L3100						
I129	<b>1.15E+00</b>	U	6.7E-01	6.7E-01	6.51E-01	pCi/L	3.27E-01	1.00E+00	(3.4)	10/19/16 03:20 p	2.024	LEP4\$1
Batch: 6273030	C14_LSC			Work Order: M89L31AD		Report DB ID: 9M89L3100						
C-14	<b>1.50E+00</b>	U	4.0E+00	4.3E+00	9.49E+00	pCi/L	4.43E+00	5.00E+01	0.16	10/20/16 01:03 p	0.25	LSC3
Batch: 6292018	9310_ALPHABETA_GPC			Work Order: M89L32AA		Report DB ID: 9M89L3200						
Alpha	<b>8.40E-01</b>	U	1.3E+00	1.3E+00	2.20E+00	pCi/L	9.91E-01	3.00E+00	0.38	10/21/16 03:22 p	0.1752	GPC21C

No. of Results: 6      Comments:

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260417-5  
 Client Sample ID: B36C94

SDG: W07625  
 Report No.: 69692  
 COC No.: I16-030-074

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
											Total Sa Size	Aliquot Size	Primary Detector
Batch: 6272027 H-3	906.0_H3_LSC <b>9.22E+03</b>		3.9E+02	5.5E+02	Work Order: M89PN1AA		Report DB ID: 9M89PN10						
					Work Order: M89PN1AA	3.39E+02	pCi/L	100%	(27.2)	10/14/16 11:00 p	0.00501	LSC8	
						1.59E+02	7.00E+02	(33.5)			L		
Batch: 6273031 STRONTIUM	SRISO_SEP_PRECIP_GPC <b>2.01E+03</b>		1.9E+01	4.6E+02	Work Order: M89PN1AC		Report DB ID: 9M89PN10						
					Work Order: M89PN1AC	1.27E+00	pCi/L	86%	(1580.4)	10/6/16 10:11 p	0.5082	GPC31C	
						5.70E-01	2.00E+00	(8.8)			L		

No. of Results: 2      Comments:

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260417-3  
 Client Sample ID: B36CJ5

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6272027 H-3	906.0_H3_LSC <b>9.37E+01</b> U	1.5E+02	1.6E+02	1.56E+02	M89PL1AA	Report DB ID: M89PL10							
							3.56E+02	pCi/L	100%	0.26	10/14/16 08:56 p	0.00501	LSC8
							1.67E+02	7.00E+02	(1.2)				L

Batch: 6273031 STRONTIUM	SRIISO_SEP_PRECIP_GPC <b>1.59E-01</b> U	8.8E-01	8.8E-01	8.8E-01	Work Order: M89PL1AC	Report DB ID: M89PL10							
							1.58E+00	pCi/L	73%	0.1	10/6/16 10:11 p	0.501	GPC31A

No. of Results: 2      Comments:

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260417-4  
Client Sample ID: B36CJ6

SDG: W07625  
Report No.: 69692  
COC No.: I16-030-096

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6272027 H-3	906.0_H3_LSC 1.06E+04	4.2E+02	6.1E+02	4.2E+02	Work Order: M89PM1AA M89PM1AC	3.52E+02 1.17E+00	pCi/L pCi/L	Report DB ID: 9M89PM10 100% (30.)	Report DB ID: 9M89PM10 100% (34.8)	10/14/16 09:58 p (34.8)	0.00504 0.00504	L L	LSC8
Batch: 6273031 STRONTIUM	SRIISO_SEP_PRECIP_GPC 1.01E+04	4.1E+01	2.3E+03	2.3E+03	Work Order: M89PM1AC	5.21E-01	2.00E+00	Report DB ID: 9M89PM10 89% (8635.1)	Report DB ID: 9M89PM10 89% (8.8)	10/6/16 10:11 p (8.8)	0.5064 0.5064	L L	GPC31B
No. of Results: 2	Comments:												

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61210406-1  
Client Sample ID: B36FW5

SDG: W07625  
Report No.: 69692  
COC No.: S16-009-158

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
											Total Sa Size	Aliquot Size	Primary Detector
Batch: 6260018	GAMMA_GS				Work Order: M88401AD	Report DB ID: 9M884010							
CO-60	-4.93E-01	U	1.6E+00	1.6E+00	2.96E+00	pCi/L	1.48E+00	2.50E+01	-0.17	10/12/16 02:43 p	2.0146	GER19\$1	L
CS-134	2.07E+00	U	1.6E+00	1.6E+00	3.30E+00	pCi/L	1.63E+00	8.00E+01	-0.6	10/12/16 02:43 p	2.0146	GER19\$1	L
CS-137	-6.62E-01	U	1.5E+00	1.5E+00	2.58E+00	pCi/L	1.29E+00	1.50E+01	-0.26	10/12/16 02:43 p	2.0146	GER19\$1	L
EU-152	-6.59E-01	U	3.4E+00	3.4E+00	5.83E+00	pCi/L	2.91E+00	5.00E+01	-0.11	10/12/16 02:43 p	2.0146	GER19\$1	L
EU-154	-6.97E+00	U	5.2E+00	5.2E+00	7.73E+00	pCi/L	3.90E+00	5.00E+01	-0.39	10/12/16 02:43 p	2.0146	GER19\$1	L
EU-155	7.74E-01	U	2.7E+00	2.7E+00	4.32E+00	pCi/L	2.14E+00	5.00E+01	-0.9	10/12/16 02:43 p	2.0146	GER19\$1	L
K-40	-1.13E+02	U	4.3E+01	4.3E+01	8.21E+01	pCi/L	4.11E+01	0.00E+01	-2.7	10/12/16 02:43 p	2.0146	GER19\$1	L
SB-125	2.39E+00	U	3.4E+00	3.4E+00	6.23E+00	pCi/L	3.08E+00	5.00E+01	0.18	10/12/16 02:43 p	2.0146	GER19\$1	L
									0.57				
									-1(4)	10/12/16 02:43 p	2.0146	GER19\$1	L
									-(5.3)				
									0.38	10/12/16 02:43 p	2.0146	GER19\$1	L
									(1.4)				
Batch: 6270072	SE79_SEP_1E_LSC				Work Order: M88401AE	Report DB ID: 9M884010							
SE-79	8.62E+00	U	7.2E+00	8.4E+00	1.69E+01	pCi/L	7.89E+00	3.00E+01	83%	10/29/16 05:46 p	0.2031	LSC3	L
Batch: 6270074	9310_ALPHABETA_GPC				Work Order: M88401AA	Report DB ID: 9M884010							

69 of 104 TestAmerica Inc MDC/MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
V5.8 A2002 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdi, Total Uncert, RDL or not identified by gamma scan software.

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61210406-1  
 Client Sample ID: B36FW5

SDG: W07625  
 Report No.: 69692  
 COC No.: S16-009-158

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.	
										Total Sa Size	Aliquot Size
Beta	1.61E+01	2.2E+00	3.1E+00	2.72E+00	pCi/L	1.30E+00	4.00E+00	(5.9) (10.4)	10/13/16 08:36 p	0.1485	GPC28C
										L	
Batch: 6271048 Tc-99	TC99_ETV/DSK_LSC 2.11E+01	8.1E+00	8.5E+00	Work Order: M88401AF 1.75E+01	pCi/L	8.10E+00	5.00E+01	(1.2) (5.)	Report DB ID: 9M884010 11/11/16 01:38 a	0.1262	LSC8
										L	
Batch: 6273030 C-14	C14_LSC 1.83E+00 U	4.0E+00	4.3E+00	Work Order: M88401AC 9.50E+00	pCi/L	4.43E+00	5.00E+01	100% 0.85	Report DB ID: 9M884010 10/20/16 09:02 a	0.25	LSC3
										L	
No. of Results: 12	Comments:										

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61220417-1  
Client Sample ID: B36FX0

SDG: W07625  
Report No.: 69692  
COC No.: S16-009-159

Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
										Total Sa Size	Aliquot Size	Primary Detector
Batch: 6260018	GAMMA_GS			Work Order: M89DH1AD	Report DB ID: 9M89DH10							
CO-60	7.78E-01	U	2.2E+00	2.2E+00	4.20E+00	pCi/L	0.19	10/13/16 08:17 a		2.0176	GER12\$1	L
CS-134	6.26E-01	U	2.1E+00	2.1E+00	3.80E+00	pCi/L	0.7	10/13/16 08:17 a		2.0176	GER12\$1	L
CS-137	-5.08E-01	U	2.0E+00	2.0E+00	3.39E+00	pCi/L	0.16	10/13/16 08:17 a		2.0176	GER12\$1	L
EU-152	1.83E-01	U	4.7E+00	4.7E+00	8.04E+00	pCi/L	0.61	10/13/16 08:17 a		2.0176	GER12\$1	L
EU-154	-2.63E+00	U	5.6E+00	5.6E+00	9.60E+00	pCi/L	-0.52	10/13/16 08:17 a		2.0176	GER12\$1	L
EU-155	4.64E+00	U	4.8E+00	4.8E+00	8.97E+00	pCi/L	0.08	10/13/16 08:17 a		2.0176	GER12\$1	L
K-40	-5.92E+01	U	5.5E+01	5.5E+01	1.10E+02	pCi/L	-0.27	10/13/16 08:17 a		2.0176	GER12\$1	L
SB-125	1.17E+00	U	4.6E+00	4.6E+00	8.25E+00	pCi/L	-0.94	10/13/16 08:17 a		2.0176	GER12\$1	L
					4.07E+00		0.52	10/13/16 08:17 a		2.0176	GER12\$1	L
							(1.9)			2.0176	GER12\$1	L
							-0.54	10/13/16 08:17 a		2.0176	GER12\$1	L
							-0.22	10/13/16 08:17 a		2.0176	GER12\$1	L
							0.14	10/13/16 08:17 a		2.0176	GER12\$1	L
							0.51					
Batch: 6270072	SE79_SEP_1E_LSC			Work Order: M89DH1AF	Report DB ID: 9M89DH10							
SE-79	2.31E+01		8.7E+00	1.0E+01	1.84E+01	pCi/L	88%	(1.3)	10/29/16 06:33 p	0.203	LSC3	L
					8.60E+00		3.00E+01	(4.6)				
Batch: 6270074	9330_ALPHABETA_GPC			Work Order: M89DH1AA	Report DB ID: 9M89DH10							

TestAmerica Inc MDC/MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdi, Total Uncert, RDL or not identified by gamma scan software.  
V5.8 A2002

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61220417-1  
 Client Sample ID: B36FX0

SDG: W07625  
 Report No.: 69692  
 COC No.: S16-009-159

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector	Ordered by Client Sample ID, Batch No.	
													Report DB ID:	Report DB ID:
Beta	9.48E+02	1.3E+01	1.2E+02	2.90E+00	pCi/L	1.38E+00	4.00E+00	(326.5) (15.9)	10/13/16 08:36 p	0.1293	L	GPC31C		
Batch: 6271048	TC99_ETV/DSK_LSC	1.13E+03	3.1E+01	Work Order: M89DH1AG	Report DB ID: 9M89DH10	3.9E+01	1.62E+01	pCi/L	100% (69.7) (58.)	11/11/16 02:21 a	0.1357	L	LSC8	
Batch: 6272025	I129LL_SEP_LEPS_GS	2.77E+00	9.3E-01	Work Order: M89DH1AE	Report DB ID: 9M89DH10	9.3E-01	8.34E-01	pCi/L	78% (3.3) (5.9)	10/19/16 08:41 a	2.0153	L	LEP4\$1	
Batch: 6273030	C14_LSC	4.48E+00	4.1E+00	Work Order: M89DH1AC	Report DB ID: 9M89DH10	4.4E+00	9.50E+00	pCi/L	100% (2.)	10/20/16 09:50 a	0.25	L	LSC3	
No. of Results: 13	Comments:													

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61210406-2  
Client Sample ID: B36FX5

SDG: W07625  
Report No.: 69692  
COC No.: S16-009-160

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
											Total Sa Size	Aliquot Size	Primary Detector
Batch: 6260018	GAMMA_GS				Work Order: M88411AD	Report DB ID: 9M884110							
CO-58	-1.96E+00	U	2.3E+00	2.3E+00	3.71E+00	pCi/L	3.71E+00	pCi/L	-0.53 (-1.7)	10/12/16 11:44 p	2.0229	GER12\$1	L
CS-134	1.68E+00	U	2.1E+00	2.1E+00	4.07E+00	pCi/L	4.07E+00	pCi/L	0.41	10/12/16 11:44 p	2.0229	GER12\$1	L
CS-137	1.51E-01	U	1.9E+00	1.9E+00	3.46E+00	pCi/L	2.00E+00	8.00E+01	(1.6)	10/12/16 11:44 p	2.0229	GER12\$1	L
EU-152	1.03E+00	U	5.1E+00	5.1E+00	9.21E+00	pCi/L	4.60E+00	5.00E+01	0.04 0.16	10/12/16 11:44 p	2.0229	GER12\$1	L
EU-154	3.58E-01	U	5.7E+00	5.7E+00	1.05E+01	pCi/L	5.26E+00	5.00E+01	0.4 0.03	10/12/16 11:44 p	2.0229	GER12\$1	L
EU-155	-8.29E-01	U	4.6E+00	4.6E+00	8.07E+00	pCi/L	4.01E+00	5.00E+01	-0.1 -0.36	10/12/16 11:44 p	2.0229	GER12\$1	L
K-40	-4.23E+01	U	5.4E+01	5.4E+01	1.11E+02	pCi/L	5.56E+01	pCi/L	-0.38 (-1.6)	10/12/16 11:44 p	2.0229	GER12\$1	L
SB-125	-3.12E+00	U	4.8E+00	4.8E+00	7.96E+00	pCi/L	3.93E+00	5.00E+01	-0.39 (-1.3)	10/12/16 11:44 p	2.0229	GER12\$1	L
Batch: 6270072	SE79_SEP_1E_LSC				Work Order: M88411AE	Report DB ID: 9M884110							
SE-79	-3.07E+00	U	6.2E+00	7.2E+00	1.57E+01	pCi/L	7.34E+00	3.00E+01	90% -0.85	10/29/16 06:10 p	0.2027	LSC3	L
Batch: 6270074	9330_ALPHABETA_GPC				Work Order: M88411AA	Report DB ID: 9M884110							

TestAmerica Inc MDC/MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdi, Total Uncert, RDL or not identified by gamma scan software.  
V5.8 A2002

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61210406-2  
 Client Sample ID: B36FX5

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Beta	1.60E+01	2.4E+00	3.2E+00	3.00E+00	pCi/L	100%	(5.3)	10/13/16 08:36 p		0.1339	L	GPC28D
					1.43E+00	4.00E+00	(10.1)					
Batch:	6271048	TC99_ETV/DSK_LSC		Work Order:	M88411AF	Report DB ID:	9M884110					
Tc-99	2.43E+01	8.1E+00	8.5E+00	1.70E+01	pCi/L	100%	(1.4)	11/11/16 02:00 a		0.13	L	LSC8
					7.88E+00	5.00E+01	(5.7)					
Batch:	6273030	C14_LSC		Work Order:	M88411AC	Report DB ID:	9M884110					
C-14	5.13E+00	U	4.2E+00	4.6E+00	9.89E+00	pCi/L	100%	0.52	10/20/16 09:26 a	0.25	L	LSC3
					4.62E+00	5.00E+01	(2.2)					

No. of Results: 12      Comments:

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260405-1  
Client Sample ID: B36H06

SDG: W07625  
Report No.: 69692  
COC No.: S16-009-167

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
											Total Sa Size	Aliquot Size	Primary Detector
Batch: 6270074	9310_ALPHABETA_GPC				Work Order: M89L91AD		Report DB ID: 9M89L910						
Beta	<b>1.78E+01</b>	U	3.4E+00	4.0E+00	4.51E+00	pCi/L	100%	(4.)	10/14/16 09:03 a		0.0797	GPC26B	
					2.16E+00	4.00E+00	(8.8)			L			
Batch: 6271048	TC99_ETVDSK_LSC				Work Order: M89L91AG		Report DB ID: 9M89L910						
Tc-99	<b>4.93E+00</b>	U	7.2E+00	7.6E+00	1.75E+01	pCi/L	100%	0.28	11/11/16 05:16 a		0.1262	LSC8	
					8.09E+00	5.00E+01	(1.3)			L			
Batch: 6272025	I129LL_SEP_LEPS_GS				Work Order: M89L91AE		Report DB ID: 9M89L910						
I129	<b>8.01E+00</b>	U	1.4E+00	1.4E+00	6.16E-01	pCi/L	100%	(13.)	10/19/16 03:21 p		2.0192	LEP5\$1	
					3.10E-01	1.00E+00	(11.3)			L			
Batch: 6272027	906.0_H3_LSC				Work Order: M89L91AA		Report DB ID: 9M89L910						
H-3	<b>4.24E+04</b>	U	7.9E+02	1.8E+03	3.41E+02	pCi/L	100%	(124.)	10/14/16 01:43 p		0.00503	LSC8	
					1.60E+02	7.00E+02	(46.4)			L			
Batch: 6292018	9310_ALPHABETA_GPC				Work Order: M89L92AC		Report DB ID: 9M89L920						
Alpha	<b>-5.10E-02</b>	U	4.0E-01	4.0E-01	7.56E-01	pCi/L	100%	-0.07	10/21/16 03:22 p		0.2067	GPC21D	
					3.36E-01	3.00E+00	-0.25			L			

No. of Results: 5      Comments:

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260405-2  
Client Sample ID: B36M18

SDG: W07625  
Report No.: 69692  
COC No.: S16-009-167

Ordered by Client Sample ID, Batch No.												
Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6272027 H-3	906.0_H3_LSC <b>4.62E+03</b>	2.9E+02	3.7E+02	Work Order: M89MN1AA 3.43E+02	pCi/L 1.61E+02	Report DB ID: 9M89MN10 100% (13.5) 7.00E+02 (25.3)	10/14/16 02:45 p L			0.005	L	LSC8
Batch: 6273031 STRONTIUM	SRIISO_SEP_PRECIP_GPC <b>7.68E+02</b>	1.2E+01	1.8E+02	Work Order: M89MN1AC 1.46E+00	pCi/L 6.62E-01	Report DB ID: 9M89MN10 83% (526.2) 2.00E+00 (8.4)	10/6/16 09:05 p L			0.5177	L	GPC32D
No. of Results: 2	Comments:											

11/15/2016

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260416-1  
 Client Sample ID: B36M56

SDG: W07625  
 Report No.: 69692  
 COC No.: S16-009-294

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
											Total Sa Size	Aliquot Size	Primary Detector
Batch: 6272027	906.0_H3_LSC				Work Order: M89PF1AA		Report DB ID: 9M89PF10						
H-3	<b>3.60E+03</b>	2.7E+02	3.2E+02	2.7E+02	3.39E+02	pCi/L	100% (10.6)	100% (22.3)	10/14/16 03:46 p	10/14/16 03:46 p	0.00504	LSC8	L

No. of Results: 1      Comments:

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260416-3  
Client Sample ID: B36M58

SDG: W07625  
Report No.: 69692  
COC No.: S16-009-295

Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
										Total Sa Size	Aliquot Size	Primary Detector
Batch: 6260018	GAMMA_GS			Work Order: M89PH1AF	Report DB ID: 9M89PH10							
CO-60	<b>3.91E-02</b> U	1.3E+00	1.3E+00	1.3E+00	2.54E+00	pCi/L	1.28E+00	2.50E+01	0.02	10/13/16 08:20 a	2.0103	GER16\$1 L
CS-134	<b>-7.01E-01</b> U	1.1E+00	1.1E+00	1.1E+00	1.92E+00	pCi/L	9.58E-01	8.00E+01	-0.36	10/13/16 08:20 a	2.0103	GER16\$1 L
CS-137	<b>3.36E-01</b> U	1.1E+00	1.1E+00	2.12E+00	2.12E+00	pCi/L	1.07E+00	1.50E+01	0.16	10/13/16 08:20 a	2.0103	GER16\$1 L
EU-152	<b>-1.16E-01</b> U	2.8E+00	2.8E+00	4.90E+00	4.90E+00	pCi/L	2.45E+00	5.00E+01	-0.02	10/13/16 08:20 a	2.0103	GER16\$1 L
EU-154	<b>2.12E+00</b> U	4.0E+00	4.0E+00	8.16E+00	8.16E+00	pCi/L	4.11E+00	5.00E+01	-0.08	10/13/16 08:20 a	2.0103	GER16\$1 L
EU-155	<b>-9.78E-01</b> U	1.6E+00	1.6E+00	2.69E+00	2.69E+00	pCi/L	1.34E+00	5.00E+01	(1.1)	10/13/16 08:20 a	2.0103	GER16\$1 L
K-40	<b>-2.63E+01</b> U	1.9E+01	1.9E+01	3.26E+01	3.26E+01	pCi/L	1.64E+01	-	-0.36	10/13/16 08:20 a	2.0103	GER16\$1 L
SB-125	<b>9.43E-01</b> U	2.5E+00	2.5E+00	4.70E+00	4.70E+00	pCi/L	2.33E+00	5.00E+01	-0.81	10/13/16 08:20 a	2.0103	GER16\$1 L
									-0.2	10/13/16 08:20 a	2.0103	GER16\$1 L
									0.74			
Batch: 6270062	AMCMISO_EIE_PLT_AEA			Work Order: M89PH1AD	Report DB ID: 9M89PH10							
AMERICIUM 241	<b>1.32E-01</b> U	3.0E-01	3.0E-01	6.24E-01	6.24E-01	pCi/L	1.34E-01	1.00E+00	95%	10/19/16 08:32 p	0.2056	ALP410 L
Batch: 6270063	PUSO_PLATE_AEA			Work Order: M89PH1AG	Report DB ID: 9M89PH10							

TestAmerica Inc MDC/MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdi, Total Uncert, RDL or not identified by gamma scan software.  
V5.8 A2002

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260416-3  
Client Sample ID: B36M58

SDG: W07625  
Report No.: 69692  
COC No.: S16-009-295

Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
										Total Sa Size	Aliquot Size	Primary Detector
PU-238	-2.80E-02	U	3.1E-01	3.1E-01	6.86E-01	pCi/L	88%	-0.04	10/19/16 08:36 p	0.2079	ALP434	L
PU239/40	-9.33E-03	U	3.1E-01	3.1E-01	5.93E-01	pCi/L	88%	-0.02	10/19/16 08:36 p	0.2079	ALP434	L
Batch: 6270064	PU241_1E_LSC		Work Order: M89PH1AA		Report DB ID: 9M89PH10							
PU-241	-8.50E-01	U	7.6E+00	1.0E+01	1.85E+01	pCi/L	88%	-0.05	10/29/16 08:02 a	0.2079	LSC10	L
Batch: 6270068	UISO_PLATE_AEA		Work Order: M89PH1AK		Report DB ID: 9M89PH10							
U-234	-3.09E-03	U	3.1E-01	3.1E-01	5.36E-01	pCi/L	85%	-0.01	10/26/16 10:22 p	0.2024	ALP433	L
U-235	-3.09E-03	U	3.1E-01	3.1E-01	5.36E-01	pCi/L	85%	-0.01	10/26/16 10:22 p	0.2024	ALP433	L
U-238	1.45E-01	U	3.1E-01	3.1E-01	5.89E-01	pCi/L	85%	-0.02	10/26/16 10:22 p	0.2024	ALP433	L
Batch: 6270072	SE79_SEP_1E_LSC		Work Order: M89PH1AH		Report DB ID: 9M89PH10							
SE-79	2.36E+01		8.1E+00	9.4E+00	1.72E+01	pCi/L	82%	(1.4) (5.)	10/29/16 07:21 p	0.2028	LSC3	L
Batch: 6271048	TC99_ETVDSK_LSC		Work Order: M89PH1AJ		Report DB ID: 9M89PH10							
Tc-99	2.30E+00	U	6.9E+00	7.3E+00	1.71E+01	pCi/L	100%	0.13	11/11/16 06:21 a	0.1285	LSC8	L
Batch: 6272027	906.0_H3_LSC		Work Order: M89PH1AC		Report DB ID: 9M89PH10							
TestAmerica Inc	MDC/MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.											
V5.8 A2002	U Qual - Analyzed for but not detected above limiting criteria, Mdc/MDA/MdI, Total Uncert, RDL or not identified by gamma scan software.											

11/15/2016

REV. 1

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260416-3  
 Client Sample ID: B36M58

SDG: W07625  
 Report No.: 69692  
 COC No.: S16-009-295

Parameter	Result	Qual	Count Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.	
										Total Sa Size	Aliquot Size
H-3	1.92E+03	2.2E+02	2.5E+02	3.52E+02	3.52E+02	pCi/L	100%	(5.4) (/15.3)	10/14/16 05:50 p	0.00502	LSC8
							1.65E+02	7.00E+02			L
Batch: 6273030	C14_LSC	Work Order: M89PH1AE	Report DB ID: 9M89PH10								
C-14	3.62E+01	5.5E+00	6.2E+00	9.50E+00	9.50E+00	pCi/L	100%	(3.8) (11.7)	10/20/16 01:28 p	0.25	LSC3
							4.43E+00	5.00E+01			L

No. of Results: 19      Comments:

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260417-1  
 Client Sample ID: B36M59

SDG: W07625

Report No.: 69692

COC No.: I16-030-153

Collection Date: 9/23/2016 1:00:00 PM

Received Date: 9/23/2016 3:05:00 PM

Matrix: WATER

Ordered by Client Sample ID, Batch No.						
Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc
Batch: 6272027	906.0_H3_LSC			Work Order: M89PJ1AA	Report DB ID: 9M89PJ10	
H-3	<b>3.70E+02</b>	1.6E+02	1.7E+02	3.48E+02 pCi/L	100% (1.1) 1.63E+02 7.00E+02 (4.3)	10/14/16 06:52 p L

No. of Results: 1      Comments:

TestAmerica Inc      MDC/MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
 rptSTLRchSample      U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdi, Total Uncert, RDL or not identified by gamma scan software.  
 V5.8 A2002

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260417-2  
 Client Sample ID: B36MB8

SDG: W07625  
 Report No.: 69692  
 COC No.: I16-030-170

Parameter	Result	Qual	Count (2 s)	Error (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Ordered by Client Sample ID, Batch No.		
											Total Sa Size	Aliquot Size	Primary Detector
Batch: 6272027	906.0_H3_LSC				Work Order: M89PK1AA		Report DB ID: 9M89PK10						
H-3	<b>5.45E+03</b>	3.1E+02	4.0E+02		3.40E+02	pCi/L	100% (16.)		10/14/16 07:54 p		0.00503	LSC8	L

No. of Results: 1      Comments:

**FORM I**  
**SAMPLE RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc  
Lot-Sample No.: J61260416-2  
Client Sample ID: B36MF9

SDG: W07625  
Report No.: 69692  
COC No.: S16-009-315

Ordered by Client Sample ID, Batch No.											
Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUncert	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6272027	906.0_H3_LSC			Work Order: M89PG1AA		Report DB ID: 9M89PG10					
H-3	7.10E+03	3.5E+02	4.7E+02	3.40E+02	pCi/L	100% (20.9)	100% (30.5)	10/14/16 04:48 p	0.00501	LSC8	L

No. of Results: 1      Comments:

11/15/2016

Date: 15-Nov-16

**FORM II**

**DUPPLICATE RESULTS**

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61130418-1  
 Client Sample ID: B368H9 DUP

SDG: W07612  
 Report No. : 69692  
 COC No.: W16-009-144

Parameter	Result, Orig Rst	Count Error ( 2 s)	CSU ( 2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6292018	9310_ALPHABETA_GPC	Work Order: M879C2AD		Report DB ID: M879C2DR		Orig Sa DB ID: 9M879C20				
Alpha	8.48E-02	U	2.2E+00	4.08E+00	pCi/L	100%	10/21/16 10:55 a	0.02	0.0826	GPC24A
	1.60E+00	U	RPD 179.9	3.00E+00		0.08		L		

No. of Results: 1      Comments:

11/15/2016

Date: 15-Nov-16

**FORM II**

**DUPPLICATE RESULTS**

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260401-1  
 Client Sample ID: B36BM0 DUP

SDG: W07625  
 Report No. : 69692  
 COC No.: X16-053-018

Parameter	Result, Orig Rst	Count ( 2 s)	CSU ( 2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6271042	RATOT_AEAGEA		Work Order: M89LW1AD	Report DB ID: M89LW1DR		Orig Sa DB ID: 9M89LW10				
TOTAL ALPHA RA	-5.16E-03	U	2.0E-01	4.26E-01	pCi/L	97%	10/17/16 11:38 p	0.5063	L	GPC24B
	2.61E-02	U	RPD 298.7	3.00E+00		-0.01				
						-0.05				

No. of Results: 1      Comments:

11/15/2016

Date: 15-Nov-16

**FORM II**

**DUPPLICATE RESULTS**

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61260401-6  
 Client Sample ID: B36BM6 DUP

SDG: W07625  
 Report No. : 69692  
 COC No. : X16-053-019

Parameter	Result, Orig Rst	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6271048	TC99_ETVDSK_LSC		Work Order: M89L31AH		Report DB ID: M89L31HR		Orig Sa DB ID: 9M89L310			
Tc-99	6.16E+01	9.6E+00	1.0E+01	1.65E+01	pCi/L	100% (3.7)	11/11/16 04:54 a	0.1338	L	LSC8
	6.00E+01	RPD 2.5		5.00E+01		(12.3)				

No. of Results: 1      Comments:

11/15/2016

Date: 15-Nov-16

**FORM II**

**DUPPLICATE RESULTS**

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61190413-1  
 Client Sample ID: B36HX3 DUP

SDG: W07612  
 Report No. : 69692  
 COC No.: S16-009-195

Parameter	Result, Orig Rst	Count ( 2 s)	CSU ( 2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6270072	SE79_SEP_1E_LSC		Work Order: M88N51AL		Report DB ID: M88N51LR		Orig Sa DB ID: 9M88N510			
SE-79	4.49E+00	U	6.8E+00	7.9E+00	1.62E+01 pCi/L	84%	10/29/16 05:22 p	0.209	L	LSC3
	-2.71E+00	U	RPD 807.4		3.00E+01	(1.1)				

No. of Results: 1      Comments:

11/15/2016

Date: 15-Nov-16

**DUPLICATE RESULTS**

**Lab Name:** TestAmerica Inc  
**Lot-Sample No.:** J61150409-1  
**Client Sample ID:** B36KF8 DUP

**SDG:** W07619  
**Report No. :** 69692  
**COC No. :** F16-046-168

**Collection Date:** 9/14/2016 10:50:00 AM  
**Received Date:** 9/14/2016 2:10:00 PM  
**Matrix:** WATER

Parameter	Result, Orig Rst	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6260018	GAMMA_GS		Work Order: M88G61AF	Report DB ID: M88G61FR	Orig Sa DB ID: 9M88G610						
CO-60	4.33E-01	U	1.3E+00	2.71E+00	pCi/L		0.16	10/12/16 02:38 p			1.9855 GER17\$1
CS-134	-3.65E-01	U	<b>RPD 2367.6</b>	1.4E+00	2.55E+00	pCi/L	0.65				L
	-2.77E-01	U		1.4E+00			-0.11	10/12/16 02:38 p			1.9855 GER17\$1
	-2.00E+00	U	<b>RPD -151.4</b>	1.3E+00	8.00E+01		-0.39				L
CS-137	6.49E-03	U	<b>RPD 178.3</b>	1.3E+00	2.34E+00	pCi/L	0.	10/12/16 02:38 p			1.9855 GER17\$1
	1.13E-01	U		2.9E+00	1.50E+01		0.01				L
EU-152	1.74E-01	U	<b>RPD -234.9</b>	3.6E+00	5.09E+00	pCi/L	0.03	10/12/16 02:38 p			1.9855 GER17\$1
	-2.16E+00	U		3.6E+00	5.00E+01		0.12				L
EU-154	3.95E+00	U	<b>RPD 13.5</b>	3.6E+00	8.18E+00	pCi/L	0.48	10/12/16 02:38 p			1.9855 GER17\$1
	4.52E+00	U		2.2E+00	4.13E+00	pCi/L	(2.2)				L
EU-155	3.16E+00	U	<b>RPD 128.3</b>	3.2E+01	5.00E+01		0.76	10/12/16 02:38 p			1.9855 GER17\$1
	6.89E-01	U		3.2E+01	6.31E+01	pCi/L	(2.9)				L
K-40	-3.14E+01	U	<b>RPD -27.5</b>	3.0E+00	5.70E+00	pCi/L	-0.5	10/12/16 02:38 p			1.9855 GER17\$1
	-4.14E+01	U		4.80E+00	5.00E+01		(-1.9)				L
SB-125	1.42E+00	U	<b>RPD 108.7</b>				0.25	10/12/16 02:38 p			1.9855 GER17\$1
							0.94				L

No. of Results: 8 Comments:

Date: 15-Nov-16

**FORM II****DUPPLICATE RESULTS**

**Lab Name:** TestAmerica Inc  
**Lot-Sample No.:** J61160411-1  
**Client Sample ID:** B36LF0 DUP

**SDG:** W07612  
**Report No. :** 69692  
**COC No. :** W16-009-226

Parameter	Result, Orig Rst	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6270074	9310_ALPHABETA_GPC		Work Order: M88KT1AJ	M88KT1AJ	Report DB ID: M88KT1JR	Orig Sa DB ID: 9M88KT10				
Beta	2.57E+02	5.8E+00	3.4E+01	2.30E+00	pCi/L	100% (111.5)	10/13/16 08:36 p	0.1899	GPC28A	L
	3.00E+02	RPD 15.3		4.00E+00		(15.3)				

No. of Results: 1      Comments:

11/15/2016

**FORM II****DUPPLICATE RESULTS**

**Lab Name:** TestAmerica Inc  
**Lot-Sample No.:** J61120404-4  
**Client Sample ID:** B36M17 DUP

**SDG:** W07612**Report No. :** 69692**COC No. :** S16-009-278

**Collection Date:** 9/9/2016 1:00:00 PM  
**Received Date:** 9/9/2016 3:05:00 PM

**Matrix:** WATER

Parameter	Result, Orig Rst	Count (2 s)	CSU (2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6270062	AMCMISO_EIE_PLT_AEA	Work Order: M87X81AM	Report DB ID: M87X81MR	Orig Sa DB ID: 9M87X810							
AMERICIUM 241	-1.05E-02	U	3.5E-01	6.70E-01	pCi/L	83%	-0.02	10/19/16 08:31 p	0.2005	ALP408	
	1.40E-01	U	RPD 232.7	1.00E+00			-0.06		L		
Batch: 6270063	PUISO_PLATE_AEA	Work Order: M87X81AN	Report DB ID: M87X81NR	Orig Sa DB ID: 9M87X810							
PU-238	1.01E-01	U	3.3E-01	8.25E-01	pCi/L	82%	0.12	10/19/16 08:35 p	0.2047	ALP432	
	-5.68E-02	U	RPD 709.1	1.00E+00			0.62		L		
PU239/40	-9.80E-03	U	3.3E-01	6.23E-01	pCi/L	82%	-0.02	10/19/16 08:35 p	0.2047	ALP432	
	-2.03E-02	U	RPD -69.6	1.00E+00			-0.06		L		
								Alpha Spec Result Sum = 8.1E-02			
Batch: 6270064	PU241_IE_LSC	Work Order: M87X81AP	Report DB ID: M87X81PR	Orig Sa DB ID: 9M87X810							
PU-241	3.76E+00	U	8.5E+00	2.03E+01	pCi/L	82%	0.19	10/29/16 03:51 a	0.2047	LSC10	
	8.00E+00	U	RPD 72.2	2.50E+01			0.66		L		
								Alpha Spec Result Sum = 8.1E-02			
Batch: 6270068	UIISO_PLATE_AEA	Work Order: M87X81AQ	Report DB ID: M87X81QR	Orig Sa DB ID: 9M87X810							
U-234	9.54E-01	7.8E-01	8.1E-01	5.86E-01	pCi/L	82%	(1.6)	10/26/16 07:16 p	0.2004	ALP436	
	9.47E-01	RPD 0.7		1.00E+00			(2.4)		L		
U-235	-3.20E-03	U	3.2E-01	5.55E-01	pCi/L	82%	-0.01	10/26/16 07:16 p	0.2004	ALP436	
	0.00E+00	U	RPD -200.0	1.00E+00			-0.02		L		
U-238	1.27E+00	U	9.1E-01	5.86E-01	pCi/L	82%	(2.2)	10/26/16 07:16 p	0.2004	ALP436	
	2.69E-01	U	RPD 130.3	1.00E+00			(2.7)		L		
								Alpha Spec Result Sum = 8.1E-02			
TestAmerica Inc	RPD	- Relative Percent Difference.									
rptSTLRchDupV5.	MDC(MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.										
8 A2002	U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.										

11/15/2016

Date: 15-Nov-16

## FORM II

### DUPLICATE RESULTS

**Lab Name:** TestAmerica Inc  
**Lot-Sample No.:** J61120404-4  
**Client Sample ID:** B36M17 DUP

**SDG:** W07612  
**Report No. :** 69692  
**COC No. :** S16-009-278

**Collection Date:** 9/9/2016 1:00:00 PM  
**Received Date:** 9/9/2016 3:05:00 PM  
**Matrix:** WATER

Parameter	Result, Orig Rst	Count ( 2 s)	CSU ( 2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Yield	Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
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No. of Results: 7      Comments:

11/15/2016

Date: 15-Nov-16

**FORM II**

**DUPPLICATE RESULTS**

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61270418-1  
 Client Sample ID: B36WL4 DUP

SDG: W07634  
 Report No. : 69692  
 COC No.: X17-001-202

Parameter	Result, Orig Rst	Count ( 2 s)	CSU ( 2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6277025	129LL_SEP_LEPS_GS	Work Order: M893N1AG		Report DB ID: M893N1GR		Orig Sa DB ID: 9M893N10				
129	-7.02E-03	U	2.2E-01	4.15E-01	pCi/L	99%	-0.02	10/19/16 07:31 p	2.0175	LEP5\$1
	-2.77E-01	U	RPD -190.1		1.00E+00		-0.06		L	

No. of Results: 1      Comments:

11/15/2016

Date: 15-Nov-16

**FORM II**

**DUPPLICATE RESULTS**

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J61270419-1  
 Client Sample ID: B36XK9 DUP

SDG: W07634  
 Report No. : 69692  
 COC No.: X17-001-318

Collection Date: 9/27/2016 11:33:00 AM  
 Received Date: 9/27/2016 2:50:00 PM  
 Matrix: WATER

Parameter	Result, Orig Rst	Count ( 2 s)	CSU ( 2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6277027	906.0_H3_LSC		Work Order: M893R1AG		Report DB ID: M893R1GR		Orig Sa DB ID: 9M893R10			
H-3	-2.75E+01	U	1.3E+02	1.5E+02	3.40E+02 pCi/L	100%	10/15/16 07:14 a	0.00501	L	LSC8
	1.49E+02	U	RPD 290.4		7.00E+02	-0.08				
						-0.37				

No. of Results: 1      Comments:

11/15/2016

Date: 15-Nov-16

## FORM II

### DUPLICATE RESULTS

**Lab Name:** TestAmerica Inc  
**Lot-Sample No.:** J61290429-1  
**Client Sample ID:** B37147 DUP

**SDG:** W07636  
**Report No. :** 69692  
**COC No. :** X16-064-002

Parameter	Result, Orig Rst	Count ( 2 s)	CSU ( 2 s)	MDL, Action Lev	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6273030	C14_LSC	Work Order: M9AJN1AE		Report DB ID: M9AJN1ER		Orig Sa DB ID: 9M9AJN10				
C-14	4.35E+02	1.4E+01	2.8E+01	9.54E+00	pCi/L	100% (45.6)	10/20/16 02:16 p	0.25	LSC3	
	4.59E+02	RPD 5.4		5.00E+01		(30.8)		L		

Batch: 6273031	SRISO_SEP_PRECIP_GPC	Work Order: M9AJN1AG	Report DB ID: M9AJN1GR	Orig Sa DB ID: 9M9AJN10
STRONTIUM	2.24E+00	1.0E+00	1.21E+00 pCi/L	10/06/16 10:11 p
	6.66E-01	U	RPD 108.4 2.00E+00	(4.3)

No. of Results: 2 Comments:

## BLANK RESULTS

Lab Name: TestAmerica Inc

Matrix: WATER

SDG: W07612  
Report No.: 69692

Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 6273030	C14_LSC											
C-14	-3.41E+00	U	3.7E+00	4.1E+00	9.50E+00	pCi/L	100%	-0.36	10/20/16 03:04 p	0.25	L	LSC3
					4.43E+00	5.00E+01		-1(1.7)				
Batch: 6270063	PUISO_PLATE_AEA											
PU-238	-4.20E-02	U	3.5E-01	3.5E-01	8.10E-01	pCi/L	85%	-0.05	10/19/16 08:38 p	0.2035	L	ALP435
					1.97E-01	1.00E+00		-0.24				
PU239/40	-3.50E-03	U	3.5E-01	3.5E-01	6.07E-01	pCi/L	85%	-0.01	10/19/16 08:38 p	0.2035	L	ALP435
					1.01E-01	1.00E+00		-0.02				
Batch: 6270068	UIISO_PLATE_AEA											
U-234	-5.34E-03	U	2.7E-01	2.7E-01	4.89E-01	pCi/L	90%	-0.01	10/26/16 10:23 p	0.216	L	ALP434
					8.84E-02	1.00E+00		-0.04				
U-235	-2.67E-03	U	2.7E-01	2.7E-01	4.63E-01	pCi/L	90%	-0.01	10/26/16 10:23 p	0.216	L	ALP434
					7.69E-02	1.00E+00		-0.02				
U-238	-2.67E-03	U	2.7E-01	2.7E-01	4.63E-01	pCi/L	90%	-0.01	10/26/16 10:23 p	0.216	L	ALP434
					7.69E-02	1.00E+00		-0.02				
									Ratio U-234/U-238 = 2.0			
Batch: 6270062	AMCMISO_EIE_PLT_AEA											
AMERICIUM 241	-7.03E-02	U	3.2E-01	3.2E-01	8.31E-01	pCi/L	88%	-0.08	10/19/16 08:33 p	0.2012	L	ALP411
					2.25E-01	1.00E+00		-0.44				
Batch: 6272027	PU241_IIE_LSC											
PU-241	1.09E+00	U	8.2E+00	1.1E+01	1.97E+01	pCi/L	85%	0.06	10/29/16 10:07 a	0.2035	L	LSC10
					9.45E+00	2.50E+01		0.2				
Batch: 6272027	906.0_H3_LSC											
									Report DB ID: M896X1AB			
TestAmerica Inc	MDC(MDA,J,c - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.											
v5.8 A2002	U Qual - Analyzed for but not detected above limiting criteria, Mdd/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.											

**FORM II**

**BLANK RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

**Lab Name:** TestAmerica Inc  
**Matrix:** WATER

**SDG:** W07633  
**Report No.:** 69692

Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
H-3	5.26E+01	U	1.4E+02	1.6E+02	3.57E+02	pCi/L	100%	0.15	10/15/16 10:20 a	0.00503	LSC8	L
<hr/>												
Batch: 6260018	GAMMA_GS			Work Order: M88JX1AA	Report DB ID: M88JX1AB							
CO-60	-3.95E-01	U	1.4E+00	1.4E+00	2.63E+00	pCi/L		-0.15	10/12/16 10:50 a			2.0 GER16\$1
CS-134	-7.78E-01	U	1.4E+00	1.4E+00	1.33E+00	2.50E+01		-0.55				L 2.0 GER16\$1
CS-137	-3.06E-01	U	1.1E+00	1.1E+00	2.44E+00	pCi/L		-0.32	10/12/16 10:50 a			L 2.0 GER16\$1
EU-152	4.23E-01	U	2.7E+00	2.7E+00	1.23E+00	8.00E+01		-(1.1)				L 2.0 GER16\$1
EU-154	1.63E+00	U	3.4E+00	3.4E+00	1.99E+00	pCi/L		-0.15	10/12/16 10:50 a			L 2.0 GER16\$1
EU-155	1.25E+00	U	1.5E+00	1.5E+00	1.01E+00	1.50E+01		-0.54				L 2.0 GER16\$1
K-40	-1.04E+01	U	2.1E+01	2.1E+01	4.83E+00	pCi/L		0.09	10/12/16 10:50 a			L 2.0 GER16\$1
SB-125	9.69E-01	U	2.7E+00	2.7E+00	2.42E+00			0.31				L 2.0 GER16\$1
Batch: 6270073	9310_ALPHABETA_GPC			Work Order: M89QA1AA	Report DB ID: M89QA1AB							
Alpha	-2.36E-02	U	4.2E-01	4.2E-01	7.88E-01	pCi/L	100%	-0.03	10/14/16 08:10 p	0.2007	GPC22B	L
Batch: 6292018	9310_ALPHABETA_GPC			Work Order: M9D971AA	Report DB ID: M9D971AB							

96 TestAmerica Inc MDC|MDA|Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
 v5.8 A2002 U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

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## FORM II

## BLANK RESULTS

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc

Matrix: WATER

SDG: W07612  
Report No.: 69692

Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Lc	Rpt Unit, CRDL	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Alpha	2.98E-01	U	5.3E-01	5.3E-01	9.02E-01	pCi/L	100%	0.33 (1.1)	10/21/16 03:22 p	0.2009	GPC22A L
Batch: 6270074	9310_ALPHABETA_GPC			Work Order: M89QC1AA		Report DB ID: M89QC1AB					
Beta	6.03E-01	U	1.1E+00	1.1E+00	1.78E+00	pCi/L	100%	0.34 (1.1)	10/14/16 09:03 a	0.2001	GPC26C L
Batch: 6272025	I129LL_SEP_LEPS_GS			Work Order: M896V1AA		Report DB ID: M896V1AB					
I129	-3.68E-01	U	4.2E-01	4.2E-01	6.68E-01	pCi/L	96%	-0.55 (-1.7)	10/20/16 08:57 a	2.0007	LEP4\$1 L
Batch: 6291050	I129LL_SEP_LEPS_GS			Work Order: M9D771AA		Report DB ID: M9D771AB					
I129	-4.39E-01	U	3.8E-01	3.8E-01	5.67E-01	pCi/L	98%	-0.77 (-2.3)	10/21/16 11:29 a	2.0384	LEP4\$1 L
Batch: 6271042	RATOT_AEAGEA			Work Order: M89WWV1AA		Report DB ID: M89WWV1AB					
TOTAL ALPHA RA	-1.32E-01	U	1.3E-01	1.3E-01	4.27E-01	pCi/L	85%	-0.31 (-2.)	10/17/16 11:38 p	0.5067	GPC22D L
Batch: 6273031	SRISO_SEP_PRECIP_GPC			Work Order: M9AKT1AA		Report DB ID: M9AKT1AB					
STRONTIUM	-2.78E-01	U	7.2E-01	7.3E-01	1.40E+00	pCi/L	75%	-0.2 -0.76	10/6/16 10:11 p	0.5065	GPC32B L
Batch: 6270072	SE79_SEP_IE_LSC			Work Order: M89PP91AA		Report DB ID: M89PP91AB					
SE-79	7.35E+00	U	6.8E+00	7.9E+00	1.59E+01	pCi/L	88%	0.46 (1.9)	10/29/16 07:45 p	0.2029	LSC3 L
Batch: 6271048	TC99_ETVDSK_LSC			Work Order: M89XD1AA		Report DB ID: M89XD1AB					

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TestAmerica Inc    MDC|MDA|Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.  
v5.8 A2002    U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdl, Total Uncert, RDL or not identified by gamma scan software.

Date: 15-Nov-16

**FORM II****BLANK RESULTS**

<b>Lab Name:</b>	TestAmerica Inc		<b>SDG:</b>	W07625	
<b>Matrix:</b>	WATER		<b>Report No.:</b>	69692	
Parameter	Result	Qual	Count (2 s)	CSU (2 s)	MDL, Lc
Tc-99	7.97E+00	U	7.4E+00	7.8E+00	1.76E+01 8.15E+00
					pCi/L 5.00E+01

No. of Results: 26      Comments:

Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
		100% (2.)	0.45 11/11/16 07:05 a	0.1267	L	LSC8

**FORM II**  
**LCS RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc  
Matrix: WATER

SDG: W07612  
Report No.: 69692

Parameter	Result	Count	CSU (2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector	
Batch: 6273030	C14_LSC	1.43E+02	8.7E+00	1.2E+01	9.51E+00 pCi/L	Work Order: M9AKR1AC	Report DB ID: M9AKR1CS	100%	1.44E+02 2.9E+00	99%	10/20/16 03:28 p	0.25	LSC3
Batch: 6270063	PUISO_PLATE_AEA	4.80E+00	1.9E+00	2.1E+00	7.02E-01 pCi/L	Work Order: M89PX1AC	Report DB ID: M89PX1CS	Rec Limits:	80 120	0.0		L	
Batch: 6270068	UISO_PLATE_AEA	1.35E+01	2.8E+00	4.0E+00	5.36E-01 pCi/L	Work Order: M89P51AC	Report DB ID: M89P51CS	Rec Limits:	80 120	0.1			
U-234								89%	1.54E+01 8.2E-02	87%	10/26/16 10:24 p	0.2115	ALP435
U-238		1.58E+01	3.0E+00	4.5E+00	5.08E-01 pCi/L			Rec Limits:	80 120	-0.1		L	
								89%	1.62E+01 8.5E-02	98%	10/26/16 10:24 p	0.2115	ALP435
Batch: 6270062	AMCMISO_EIE_PLT_AEA	2.46E+01	4.0E+00	6.7E+00	7.59E-01 pCi/L	Work Order: M89PW1AC	Report DB ID: M89PW1CS	Rec Limits:	80 120	0.0		L	
AMERICIUM 241								86%	2.25E+01 2.3E-01	109%	10/19/16 08:34 p	0.2039	ALP412
Batch: 6270064	PU241_IE_LSC	1.17E+03	2.7E+01	8.7E+01	2.09E+01 pCi/L	Work Order: M89P01AC	Report DB ID: M89P01CS	Rec Limits:	80 120	0.1			
PU-241								78%	1.10E+03 3.9E+01	107%	10/29/16 12:13 p	0.2075	LSC10
Batch: 6272027	906.0_H3_LSC	2.75E+03	2.5E+02	2.9E+02	3.56E+02 pCi/L	Work Order: M896X1AC	Report DB ID: M896X1CS	Rec Limits:	80 120	0.1			
H-3								100%	2.71E+03 8.1E+01	101%	10/15/16 11:22 a	0.00503	LSC8
Batch: 6260018	GAMMA_GS	3.73E+01	7.2E+00	7.2E+00	3.06E+00 pCi/L	Work Order: M88JX1AC	Report DB ID: M88JX1CS	Rec Limits:	80 120	0.0		L	
CO-60								3.80E+01 3.2E-01	98%	10/12/16 10:51 a	2.0025	GER17\$1	

**FORM II**  
**LCS RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc  
Matrix: WATER

SDG: W07612  
Report No.: 69692

Parameter	Result	Count	CSU (2 s)	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
CS-137	5.54E+01	8.7E+00	8.7E+00	2.68E+00 pCi/L	Rec Limits:	80	120	0.1	10/12/16 10:51 a	2.0025	GER17\$1
EU-152	7.77E+01	1.4E+01	1.4E+01	6.77E+00 pCi/L	Rec Limits:	80	120	0.1	10/12/16 10:51 a	2.0025	GER17\$1
Batch: 6270073 Alpha	9310_ALPHABETA_GPC	Work Order: M89QA1AC	Report DB ID: M89QA1CS	Rec Limits:	80	120	0.0			L	
Batch: 6292018 Alpha	9310_ALPHABETA_GPC	Work Order: M9D971AC	Report DB ID: M9D971CS	Rec Limits:	80	120	0.0	10/14/16 08:10 p	0.2014	GPC22C	
Batch: 6270074 Beta	9310_ALPHABETA_GPC	Work Order: M89QC1AC	Report DB ID: M89QC1CS	Rec Limits:	80	120	0.0	10/21/16 03:22 p	0.2013	GPC22B	
Batch: 6272025 I129LL_SEP_LEPS_GS	Work Order: M896V1AC	Report DB ID: M896V1CS	Rec Limits:	80	120	-0.1	10/14/16 09:03 a	0.2005	GPC26D		
I129	1.65E+01	3.1E+00	3.1E+00	1.57E+00 pCi/L	Rec Limits:	80	120	-0.1		L	
Batch: 6291050 I129LL_SEP_LEPS_GS	Work Order: M9D771AC	Report DB ID: M9D771CS	Rec Limits:	80	120	-0.1	10/20/16 08:59 a	2.001	LEP5\$1		
I129	1.80E+01	2.4E+00	2.2E+00	5.90E-01 pCi/L	Rec Limits:	80	120	-0.1		L	
Batch: 6271042 TOTAL_ALPHA RA	RATOT_AEAGEA	Work Order: M89WV1AC	Report DB ID: M89WV1CS	Rec Limits:	70	130	-0.1	10/21/16 11:32 a	2.0015	LEP5\$1	
TOTAL ALPHA RA	5.21E+00	9.5E-01	1.4E+00	6.03E-01 pCi/L	Rec Limits:	80	120	-0.2		L	
Batch: 6273031 SRSO_SEP_PRECIP_GPC	Work Order: M9AKT1AC	Report DB ID: M9AKT1CS									
TestAmerica Inc	Bias	- (Result/Expected)-1 as defined by ANSI N13.30.									
V5.8 A2002	rptSTLRchL.cs										

**FORM II**  
**LCS RESULTS**

Date: 15-Nov-16

11/15/2016

REV. 1

Lab Name: TestAmerica Inc  
Matrix: WATER

SDG: W07612  
Report No. : 69692

Parameter	Result	Count	CSU (2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
STRONTIUM	1.50E+01	1.7E+00	3.8E+00	1.24E+00	pCi/L	87%	1.29E+01	9.1E-02	116%	10/6/16 10:11 p	0.5307	GPC32C
					Rec Limits:	80	120	0.2			L	
Batch: 6271048	TC99_ETVDSK_LSC	Work Order: M89XD1AC			Report DB ID: M89XD1CS							
Tc-99	1.02E+02	1.1E+01	1.2E+01	1.69E+01	pCi/L	100%	1.06E+02	6.2E-01	97%	11/11/16 07:27 a	0.1294	LSC8
					Rec Limits:	80	120	0.0			L	

No. of Results: 18      Comments:

**FORM II****MATRIX SPIKE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J6I260405-1, B36H06

SDG: W07625  
 Report No. : 69692

Parameter	SpikeResult, Orig Rst	Count Error (2 s)	CSU (2 s)	MDCIMDA	Rpt Unit	Yield	Rec- over	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6271048	Work Order: M89L91AH	Report DB ID: M89L91HW	Orig Sa DB ID: 9M89L910								
Tc-99	5.10E+02	2.2E+01	2.6E+01	1.74E+01	pCi/L	100%	94.87%	5.37E+02	11/11/16 05:59 a	0.1261	TC99_ETVDSK_LSC LSC8

Number of Results: 1

Comments:

TestAmerica Inc      RER - Replicate Error Ratio =  $\frac{(S-D)}{S}$   
 rptSTLRchMs      Bias -  $\frac{(Result-Expected)}{Expected}$ -1 as defined by ANSI N13.30.

V5.8 A2002

Date: 15-Nov-16

## FORM II

### MATRIX SPIKE RESULTS

Lab Name: TestAmerica Inc

SDG: W07634

Lot-Sample No.: J6I270419-2, B36XK4

Report No. : 69692

Parameter	SpikeResult, Orig Rst	Count Error (2 s)	CSU (2 s)	MDCIMDA	Rpt Unit	Yield	Rec- over	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analyst Method, Primary Detector
	Work Order:		Report DB ID:	M893T1AG	Orig Sa DB ID:	9M893T10					
Batch: 6272027 H-3	2.32E+03 2.56E+04	7.1E+02 2.56E+04	1.8E+03 4.08E+02	4.08E+02 pCi/L	100%	153.89%	1.51E+03 4.5E+01	10/15/16 09:18 a	0.00431 L	906.0_H3_LSC LSC8	

Number of Results: 1

Comments:

**FORM II**  
**MATRIX SPIKE RESULTS**

Date: 15-Nov-16

Lab Name: TestAmerica Inc  
 Lot-Sample No.: J6I290429-1, B37147

SDG: W07636  
 Report No. : 69692

Parameter	SpikeResult, Orig Rst	Count Error (2 s)	CSU (2 s)	MDCIMDA	Rpt Unit	Yield	Rec- over	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 6273030	Work Order: M9AJN1AF	Report DB ID: M9AJN1FW	Orig Sa DB ID: 9M9AJN10								
C-14	-3.58E+02 U 4.59E+02	U 7.6E+00	3.3E+01	9.59E+00 pCi/L	100%				10/20/16 02:40 p	0.25 L	C14_LSC LSC3

Number of Results: 1

Comments:

TestAmerica Inc      RER - Replicate Error Ratio =  $\frac{(S-D)}{\sqrt{(TPUs+sq(TPUd))}}$  as defined by ICPT BOA.  
 rptSTLRchMs      Bias - (Result/Expected)-1 as defined by ANSI N13.30.  
 v5.8 A2002      U Qual - Analyzed for but not detected above limiting criteria, Mdc/Mda/Mdi, Total Uncert, RDL or not identified by gamma scan software.